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Providence  
R.I.

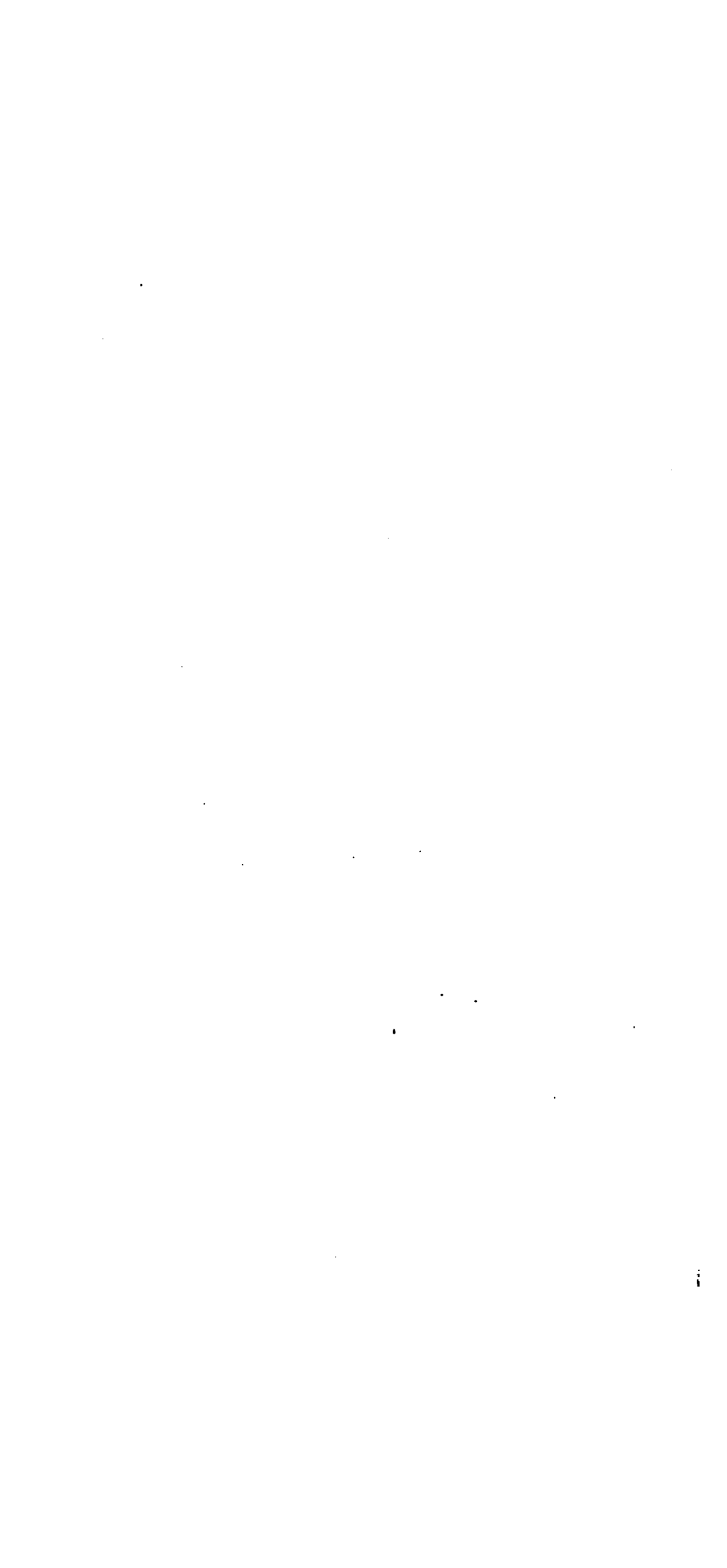












1903.]

CITY DOCUMENT.

[No. 19.]

EIGHTY-FIRST  
QUARTERLY REPORT

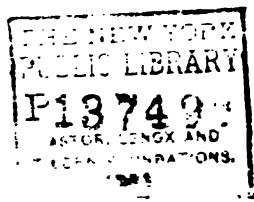
★  
Department of Public Works

OF THE  
CITY OF PROVIDENCE, R. I.

QUARTER ENDING MARCH 31, 1903.



The Providence Press:  
SNOW & FARNHAM, CITY PRINTERS,  
63 Washington Street.  
1903.



# REPORT.

OFFICE OF THE DEPARTMENT OF PUBLIC WORKS, }  
CITY HALL, PROVIDENCE, R. I., April 1, 1903. }

TO THE HONORABLE THE CITY COUNCIL:

In compliance with the requirements of Chapter 41 of the ordinances, the Commissioner of Public Works respectfully presents the eighty-first quarterly report of the expenditures by the several departments under his direction and control, with statements of work ordered and the condition and cost of same, for the quarter ending March 31, 1903.

## WATER WORKS.

January 20th, the proposal of General Fire Extinguisher Company to furnish service box covers at twenty-nine cents each, was accepted.

February 2d, the proposal of Doe & Little to furnish and deliver at Hope Pumping Station 50 tons egg white ash coal, at \$8.00 per ton, was accepted.

March 23d, the proposal of Eastern Coal Company to furnish and deliver at Hope Pumping Station 50 tons Scranton egg coal, at \$6.25 per ton, was accepted.

The average daily consumption of water during the last quarter was 12,456,477 gallons.

Water pipes were laid during the quarter as follows:



## 6-INCH.

In Elton, Frederick and Rodman streets; Humboldt, Lenox,  
Oriole and Rhode Island avenues; and in Dover street  
in the town of Cranston..... 1,816.60 feet.

or, .344 + mile.

Statement of sizes and lengths of pipe laid since the commencement of the work :

36-inch .....	10,084.00 feet.
30-inch .....	61,328.30 feet.
24-inch .....	43,758.29 feet.
20-inch .....	9,626.59 feet.
16-inch .....	34,084.95 feet.
12-inch .....	103,428.75 feet.
10-inch .....	15,057.14 feet.
8-inch .....	284,493.52 feet.
6-inch .....	1,212,745.86 feet.
<b>Total.</b> .....	<b>1,774,607.40 feet.</b>

or, 336.099 + miles.

Statement of sizes and lengths of pipe laid for the special water service for fire protection since the commencement of the work :

24-inch .....	4,188.58 feet.
16-inch .....	23,004.37 feet.
12-inch .....	2,215.76 feet.
<b>Total.</b> .....	<b>29,408.71 feet.</b>

or, 5.569 + miles.

Two fire hydrants have been set during the quarter, one in each of the following locations :

Elton street, north side, 64 feet west of west building line of Humboldt avenue.

Oriole avenue, north side, 296 feet west of west building line of Rhode Island avenue.

The total number of fire hydrants, exclusive of those for special service for fire protection, is now nineteen hundred

and sixty-two — eighteen hundred and sixty-three flush, and ninety-nine post.

The total number of fire hydrants on the special water service for fire protection is ninety-two.

During the quarter, two hundred and thirteen water meters were set, of which number forty-seven were to replace other meters. The use of five meters was discontinued.

The following meters were in use at the close of the quarter :

KIND.	SIZE.								Total.
	$\frac{3}{4}$ -in.	$\frac{1}{2}$ -in.	1-in.	1 $\frac{1}{2}$ -in.	2-in.	3-in.	4-in.	6-in.	
Ball & Fitts.....	2,270	468	111	13	5	.....	.....	.....	2,867
Ball & Fitts, rotary.....	.....	.....	5	7	.....	2	1	.....	15
Crown.....	9,219	1,039	307	135	33	24	25	1	10,783
Empire.....	820	119	58	42	12	.....	1	.....	1,052
Fales, Jenks & Sons.....	.....	.....	1	.....	.....	.....	.....	.....	1
Gem.....	.....	.....	.....	.....	11	27	15	3	56
Thomson.....	3,909	423	75	53	21	7	7	2	4,497
Trident.....	102	.....	1	.....	.....	.....	.....	.....	103
Worthington.....	1	1	.....	.....	1	.....	.....	.....	3
	16,321	2,050	558	250	83	60	49	6	19,377

One hundred and twenty plumbers' licenses were issued during the quarter, all of which expire December 31, 1903.

Five hundred and twenty-one plumbing permits were issued during the quarter.

Eighty-one applications for water were made during the quarter, making the total number March 31, 1903, twenty-five thousand five hundred and eighty-five.

The number of new service stops opened during the quarter was eighty-seven.

The total number of service stops opened to March 31, 1903, inclusive, was twenty-four thousand eight hundred and ninety-seven. The number in actual use March 31, 1903, was twenty-two thousand seven hundred and eight-four.

The amount of bills approved on account of water works from January 1 to March 31, 1903, inclusive, was :

For maintenance, . . . . . \$47,890 94

Classified as follows :

PETTACONSET PUMPING STATION.

Fuel oil.....	\$7,639 95	
Sundries.....	805 49	
Engineers.....	607 74	
Firemen.....	497 15	
Superintendence.....	396 75	
Worthington high-duty engine.....	239 55	
Labor on fuel.....	225 45	
Repairs on boilers.....	216 44	
Care of grounds.....	203 25	
Barn expenses.....	132 55	
Oil, waste and packing.....	102 73	
Lights.....	3 86	
Corliss pumping engine and house.....	45	
		\$11,091 34

SOCKANOSSET RESERVOIR.

Watchman.....	\$196 00	
Sundries.....	36 70	
		232 70

HOPE PUMPING STATION.

Coal and wood.....	\$868 85	
Firemen.....	416 50	
Engineers.....	322 00	
Lights.....	69 93	
Sundries.....	41 79	
Care of grounds.....	28 25	
Repairs on boilers.....	1 53	
Oil, waste and packing.....	1 35	
		1,750 10
Amount carried forward.....		\$13,074 44

REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 7

Amount brought forward.....		\$13,074 26	
<b>HOPE RESERVOIR.</b>			
Watchman.....	\$220 50		
Sundries.....	83 53		
			304 03
<b>FRUIT HILL RESERVOIR.</b>			
Watchman.....	\$220 50		
Sundries.....	186 22		
			406 72
<b>METER DEPARTMENT.</b>			
Setting and repairing meters.....	\$1,418 15		
Water meters .....	954 62		
			2,372 77
<b>PIPE LINE AND SERVICE STOPS.</b>			
Repairs.....	\$4,107 13		
Superintendence—salaries .....	916 65		
			5,023 78
<b>PIPE YARD.</b>			
Cast iron water pipe.....	\$15,669 71		
Service pipe.....	2,447 38		
Laying water pipe.....	1,109 90		
Laying service pipe.....	1,033 96		
Special castings.....	682 83		
Pig lead and tin.....	649 04		
Taps and stops.....	600 12		
Fire hydrants, boxes and covers.....	548 64		
Stop valves.....	509 10		
Labor on and carting pipe.....	175 65		
Tools .....	151 03		
Pipe yard, office expenses.....	62 77		
Repairs on pipe yard buildings.....	50		
			23,640 63
<b>MISCELLANEOUS.</b>			
Clerks' and inspectors' salaries .....	\$1,663 20		
Barn expenses. ....	696 30		
Prevention of defilement of the Pawtuxet.....	268 85		
Horses, wagons, harnesses, etc.....	146 08		
Telephone lines.....	137 68		
Car fares. ....	100 00		
Inspection of water pipe with reference to electro- lysis.....	50 10		
Public drinking fountains and troughs.....	6 53		
			3,068 74
			<u>\$47,890 93</u>

For construction, . . . . . \$3,913 8

Charged as follows:

Installation of sand filtration plant at Pettaconset. \$3,913 82

The total expenditures to March 31, 1903,  
inclusive, was . . . . . \$9,416,575 0

The *net* expenditure for maintenance from January 1 to  
March 31, 1903, inclusive, was..... \$42,435 7

The *net* expenditure for maintenance to March 31, 1903,  
inclusive, was..... \$1,906,995 3

The *net* expenditure for construction from July 1, 1902, to  
March 31, 1903, inclusive, was..... \$80,311 6

The value of the water works system,  
January 1, 1903, as estimated by the city  
engineer, was as follows:

Pettaconset pumping station.....	\$340,694 00
Hope pumping station .....	129,405 79
Sockanosset, Hope and Fruit Hill reservoirs.....	714,047 55
Main lines and distribution pipes.....	2,726,775 16
Real estate in Pawtuxet and Lincoln .....	15,975 00
Tools and supplies.....	29,875 18
	<hr/>
	\$3,956,772 6

Bills deposited with the city treasurer  
for collection from January 1 to March 31,  
1903, inclusive, amounted to . . . . . \$419,136 14

As follows:

Water.....	\$413,260 55
Water meters.....	3,072 25
Setting and repairing meters.....	1,677 96
Labor and material, laying services, etc., .....	797 19
Penalties.....	144 00
Rent of real estate .....	101 75
Repairs on pipe line .....	48 69
Use of teams, carting coal.....	18 75
Permanently closing service stops.....	15 00
	<hr/>
	\$419,136 14

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$414,482 77

As follows :

Water.....	\$408,883 54
Water meters.....	3,040 75
Setting and repairing meters.....	1,507 98
Labor and material, laying services, etc.....	640 63
Penalties.....	144 00
Repairs on pipe line.....	111 62
Rent of real estate.....	105 50
Permanently closing service stops.....	30 00
Use of teams, carting coal.....	18 75
	<hr/>
	\$414,482 77

## SEWERS.

During the quarter ending March 31, 1903, one hundred and sixty-one permits were issued to drain layers—sixty-nine for new work and ninety-two for extension and repairs of drains.

One hundred and thirty-three drain layers' licenses were issued during the quarter, all of which expire December 31, 1903.

March 24th, proposals were accepted to furnish and deliver on city wharf, sewer brick for the sum of eight dollars per thousand, as follows :

Manchester & Hudson, two cargoes of about 225,000 brick.  
James C. Goff, two cargoes of about 225,000 brick.

During the quarter, assessments for the cost of constructing sewers were certified to the city treasurer as follows :

Bellevue avenue, from near Elmwood to Bucklin street.....	\$1,820 85
Hamlin street, from Elmwood avenue to Roger Williams Park..	1,858 97
Doane and Everett avenues.....	2,251 54
Oriole and Rhode Island avenues.....	2,075 24
President avenue, from Arlington to Wayland.....	4,194 73
Moses Brown street, from Angell to South Angell.....	437 60
Suffolk street, from Salina to Admiral.....	861 80
Phillips street, from near Hope to Morris avenue.....	1,021 24
Primrose, Walnut and Byron streets.....	1,862 24
Calais and West Park streets.....	2,894 71
Calais, Edith and Leland streets.....	3,436 00
Massachusetts avenue, from Virginia to Broad street.....	2,561 70
Douglas and Camden avenues.....	12,025 34
<b>Total.....</b>	<b>\$37,301 96</b>

During the quarter, the construction of the following sewers was completed, namely :

No. of resolution.	Date of approval.	Date of completion.
352.	Nov. 6, 1902, <i>Doane and Everett avenues,</i>	Jan. 10, 1903.
354.	“ “ “ <i>Tuxedo and Regent avenues,</i>	April 1, 1903.

At the close of the quarter, work upon the following sewers of the improved sewerage system was in progress, namely :

No. of resolution.	Date of approval.
572.	Dec. 20, 1895, <i>Section 28, Moshassuck Division, Improved Sewerage System.</i>
381.	Oct. 4, 1901, <i>Section 27, Moshassuck Division, Improved Sewerage System.</i>
196.	June 6, 1902, <i>India and South Main streets, Improved Sewerage System.</i>

Work upon the following lateral sewer was in progress at the close of the quarter, namely :

355.	Nov. 6, 1902, <i>Wallace street, from near Webster avenue to Priscilla.</i>
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Work upon the following sewers, completing the work ordered by the city council, had not commenced March 31, 1903, namely :

No. of resolution. Date of approval.

349. Nov. 6, 1902, *Algonquin street, Reservoir avenue and right of way.*  
 350. " " " *Branch avenue, from Douglas to Veazie street.*  
 351. " " " *Cemetery street, from near North Main to Frost.*  
 353. " " " *Jewett street, from Valley 510 feet easterly.*

The amount of bills approved on account of sewers from January 1 to March 31, 1903, inclusive, was as follows :

FOR CONSTRUCTION.

Regular appropriation.....	\$8,363 73	
Improved sewerage appropriation.....	40,486 39	
		<hr/> \$48,850 12

Charged as follows :

Material.....	\$9,772 94
Contract reservations.....	1,541 00
Testing cement.....	405 86
Sundries.....	304 64
Additional catch-basins.....	144 30
Sundries, improved sewerage system.....	20 98
Tools.....	14 12
Sewer in Doane and Everett avenues.....	551 93
Sewer in Tuxedo and Regent avenues.....	1,349 39
Sewer in Wallace street, from near Webster avenue to Priscilla.....	27 30
Sewer in Moshassuck Division, Section 27.....	13,696 79
Sewer in Moshassuck Division, Section 28.....	16,985 08
Sewer in Seekonk Division, Section 29.....	4,065 79
	<hr/> \$48,850 12

For maintenance, . . . . . \$24,431 68



Bellevue avenue, from near Elmwood to Bucklin street.....	\$1,820 85
Hamlin street, from Elmwood avenue to Roger Williams Park..	1,858 97
Doane and Everett avenues.....	2,251 54
Oriole and Rhode Island avenues.....	2,075 24
President avenue, from Arlington to Wayland.....	4,194 73
Moses Brown street, from Angell to South Angell.....	437 60
Suffolk street, from Salina to Admiral.....	861 80
Phillips street, from near Hope to Morris avenue.....	1,021 24
Primrose, Walnut and Byron streets.....	1,862 24
Calais and West Park streets.....	2,894 71
Calais, Edith and Leland streets.....	3,436 00
Massachusetts avenue, from Virginia to Broad street.....	2,561 70
Douglas and Camden avenues.....	12,025 34
Total.....	\$37,301 96

During the quarter, the construction of the following sewers was completed, namely :

No. of resolution.	Date of approval.	Date of completion.
352.	Nov. 6, 1902, <i>Doane and Everett avenues,</i>	Jan. 10, 1903.
354.	" " " <i>Tuxedo and Regent avenues,</i>	April 1, 1903.

At the close of the quarter, work upon the following sewers of the improved sewerage system was in progress, namely :

No. of resolution.	Date of approval.
572.	Dec. 20, 1895, <i>Section 28, Moshassuck Division, Improved Sewerage System.</i>
381.	Oct. 4, 1901, <i>Section 27, Moshassuck Division, Improved Sewerage System.</i>
196.	June 6, 1902, <i>India and South Main streets, Improved Sewerage System.</i>

Work upon the following lateral sewer was in progress at the close of the quarter, namely :

355.	Nov. 6, 1902, <i>Wallace street, from near Webster avenue to Priscilla.</i>
------	---

Work upon the following sewers, completing the work ordered by the city council, had not commenced March 31, 1903, namely :

No. of resolution. Date of approval.

349.	Nov. 6, 1902,	<i>Algonquin street, Reservoir avenue and right of way.</i>
350.	" " "	<i>Branch avenue, from Douglas to Veazie street.</i>
351.	" " "	<i>Cemetery street, from near North Main to Frost.</i>
353.	" " "	<i>Jewett street, from Valley 510 feet easterly.</i>

The amount of bills approved on account of sewers from January 1 to March 31, 1903, inclusive, was as follows :

FOR CONSTRUCTION.

Regular appropriation.....	\$8,363 73	
Improved sewerage appropriation. ....	40,486 39	
		<hr/> \$48,850 12

Charged as follows :

Material.....	\$9,772 94
Contract reservations.....	1,541 00
Testing cement.....	405 86
Sundries.....	304 64
Additional catch-basins.....	144 30
Sundries, improved sewerage system.....	20 98
Tools.....	14 12
Sewer in Doane and Everett avenues.....	551 93
Sewer in Tuxedo and Regent avenues.....	1,349 39
Sewer in Wallace street, from near Webster avenue to Priscilla.....	27 30
Sewer in Moshassuck Division, Section 27.....	13,666 79
Sewer in Moshassuck Division, Section 28.....	16,985 08
Sewer in Seekonk Division, Section 29.....	4,065 79
	<hr/> \$48,850 12

For maintenance, . . . . . \$24,431 68

Statements have been prepared of the cost of curbstones set, ascertained by the commissioner of public works and certified to the board of aldermen for approval, as follows :

Bellevue avenue .....	\$1,087 56
Calais street.....	585 39
Eastwood avenue.....	1,407 44
Edith street.....	849 01
Grand View street.....	934 02
Hope street.....	323 82
Leland street.....	638 11
Oriole avenue.....	616 58
Oxford street....	79 68
President avenue.....	151 22
Primrose street .....	493 78
Rhode Island avenue .....	355 13
Smithfield avenue.....	2,290 01
Tenth street.....	871 29
Woodbine street.....	1,607 15
<b>Total.....</b>	<b>\$12,280 19</b>

During the quarter, the following work was completed :

#### SIDEWALKS TO BE CURBED AND GUTTERS PAVED.

Date of order.

- Oct. 16, 1902, *Primrose street, from Vinton to Vernon.*  
 Nov. 20, " *Grand View street, from Knowles to North Main.*  
 " " " *Oriole avenue, from end of curb to Rhode Island avenue ; Rhode Island avenue, from Oriole to Angell street.*

The following work was in progress March 31, 1903, namely :

#### SIDEWALKS TO BE CURBED AND GUTTERS PAVED.

Date of order.

- May 16, 1901, *Douglas avenue, from Chad Brown street to Admiral.*  
 Nov. 20, 1902, *Phillips street, from Hope to Morris avenue.*  
 Dec. 18, " *Sears avenue, from Atwells to its northerly termination.*

TO GRADE AND BUILD.

No. of resolution. Date of approval.

232. July 7, 1902, *Manton avenue, from Unit street to Chalkstone avenue.*

The following work, ordered by the board of aldermen and city council, had not commenced March 31, 1903, namely :

SIDEWALKS TO BE CURBED AND GUTTERS PAVED.

Date of order.

Oct. 16, 1902, *Laurel Hill avenue, from end of curbing to Pocasset avenue.*  
“ “ “ *Bolander street, from Abbott to Grand View.*  
Nov. 20, “ *Egan street, from Manton avenue to the bridge.*  
“ “ “ *Suffolk street, from Admiral to Salina.*  
Dec. 18, “ *Lenox avenue, from Melrose street to Hamilton.*  
“ “ “ *Hamlin street, from Roger Williams park to Elmwood avenue.*

TO PAVE WITH GRANITE BLOCKS.

No. of resolution. Date of approval.

379. Oct. 4, 1901. *Branch avenue, from Veazie street to bridge near Vandewater.*

Bills approved on account of highways from January 1 to March 31, 1903, inclusive, amounted to :

Regular appropriation .....	\$41,232 09	
Special appropriation .....	709 88	
		\$41,941 97

## Classified as follows :

Crushed stone—material and labor.....	\$8,200 59	
Cleaning streets.....	7,048 02	
Removing snow and ice.....	5,361 45	
Repairs on unpaved streets.....	4,219 24	
Barn expenses.....	2,819 77	
Blacksmith and wheelwright shop.....	2,759 85	
Steam rollers—repairs and supplies.....	2,377 99	
Labor on material.....	1,207 37	
Tools, implements, etc.....	868 44	
Stone—paving and crosswalk.....	675 30	
Repairs on stone crushers.....	581 46	
Repairs on paved streets.....	442 52	
Superintendent's salary.....	442 00	
Horses, wagons, harnesses, etc.....	396 45	
Watchman at city yard.....	156 00	
Office expenses, city yard.....	117 79	
Sundries.....	94 48	
Repairs on buildings, highway yard.....	62 78	
Fencing streets—material and labor.....	49 26	
Watering streets.....	26 21	
Building driveways, etc.....	25 48	
Car fares.....	25 00	
Telephone lines.....	5 35	
		<u>\$37,962 1</u>

NEW WORK—BUILDING AND REBUILD-  
ING STREETS, ETC.

## SIDEWALKS CURBED AND GUTTERS PAVED.

<i>Douglas avenue</i> , from Chad Brown street to Ad- miral.....	\$709 88	
<i>Grand View street</i> , from Knowles to North Main...	1,125 83	
<i>Oriole avenue</i> , from end of curb to Rhode Island avenue, and in Rhode Island avenue from Oriole to Angell street.....	1,348 35	
<i>Phillips street</i> , from Hope to Morris avenue.....	429 86	
<i>Primrose street</i> , from Vinton to Vernon.....	189 80	
<i>Sears avenue</i> , from Atwells to its northerly ter- mination.....	175 45	
		<u>3,979 1</u>
		<u>\$41,941 1</u>

Bills deposited with the city treasurer  
for collection from January 1 to March 31,  
1903, inclusive, amounted to . . . \$6,432 6

## As follows :

Labor and material.....	\$4,200 83
Blacksmith and harness work for other departments .....	1,205 30
Street sweepings.....	350 40
Boarding horses for other departments.....	324 68
Use of teams, carting coal.....	229 48
Manure from barn.....	72 00
Removing trees.....	50 00
	<u>\$6,432 69</u>

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$7,346 21

## As follows :

Labor and material.....	\$5,638 88
Blacksmith and harness work for other departments .....	661 12
Street sweepings.....	371 15
Boarding horses for other departments .....	324 68
Use of teams, carting coal.....	228 38
Manure from barn.....	72 00
Removing trees .....	50 00
	<u>\$7,346 21</u>

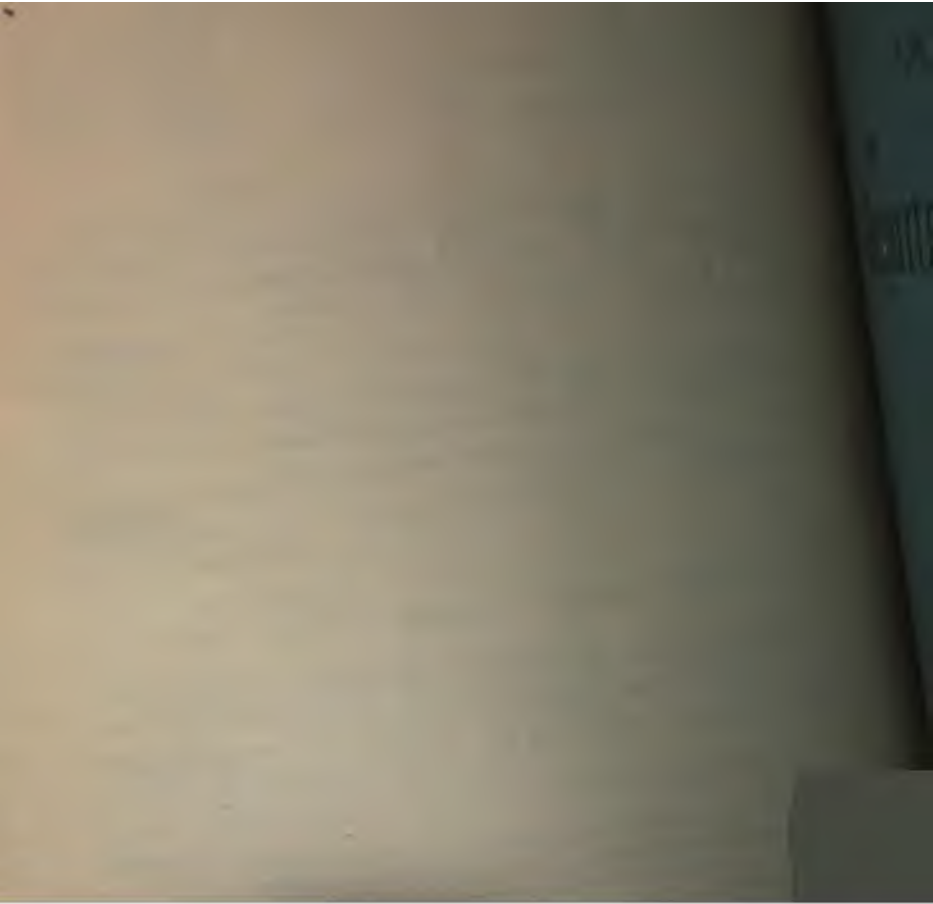
## SIDEWALKS AND CURBING.

Bills approved on account of sidewalks and curbing from January 1 to March 31, 1903, inclusive, amounted to \$1,119 57

## Charged as follows :

Concreting sidewalks.....	\$471 52
Repairing sidewalks and gutters.....	388 70
Granite curbing.....	259 35
	<u>\$1,119 57</u>

Curbing bills deposited with the city treasurer for collection from January 1 to March 31, 1903, inclusive, amounted to \$12,292 31



The following work had not commenced at the end of the quarter, namely:

No. of resolution. Date of approval.

411. Dec. 19, 1902, *Exchange bridge on its northerly side ; bridge over the river between Exchange and Burnside bridges ; River walls between Burnside and Exchange bridges.*
73. March 3, 1903, *Adelaide avenue, abutments for bridge over tracks of N. Y., N. H. and H. R. R. Co.*

Bills approved on account of bridges from January 1 to March 31, 1903, inclusive, amounted to . . . . . \$4,880 12

Charged as follows:

Atwells avenue bridge.....	\$11 51
Barn expenses.....	113 10
Branch avenue bridge.....	3 30
Building at city yard.....	10 47
Burnside bridge.....	7 90
Crawford street bridge.....	171 87
Eagle street bridge.....	85
Exchange bridge.....	14 48
Francis street bridge.....	9 30
Horses, wagons, harnesses, etc.....	12 44
Lumber, hardware, etc.....	116 60
Manton bridge.....	3 86
Manton avenue bridge.....	9 88
Mill street bridge.....	7 80
Nash lane bridge.....	14 12
Point street bridge.....	220 75
Red bridge.....	94 74
Rent of keeper's house— Washington bridge.....	32 00
Salaries — Point street bridge.....	978 25
Salaries — Red bridge.....	513 50
Salaries — Washington bridge.....	491 82
Smith street bridge.....	5 10
Sundries.....	270 16
Telephone lines.....	2 68
Tools.....	189 13

Amount carried forward..... \$3,305 61



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Amount brought forward.....	\$3,305 61
Valley street bridge— north span.....	10 85
Valley street bridge — south span.....	10 55
Wanskuck bridge.....	6 10
Washington bridge.....	1,522 32
West River street bridge.....	3 10
Whelden street bridge.....	21 59
	<hr/>
	\$4,880 12

Bills deposited for collection from January 1 to March 31, 1903, inclusive, (for lumber furnished various departments), amounted to \$210 76

During the quarter, coupons from bills collected (for lumber furnished various departments), have been returned by the city treasurer and receipted for, to the amount of \$210 76

Bills approved for account of building the Merino bridge, from January 1 to March 31, 1903, inclusive, have been paid from the special appropriation for that work, to the amount of \$23,634 55

Bills approved for account of building the river walls between the Burnside and Exchange bridges, from January 1 to March 31, 1903, inclusive, have been paid from the special appropriation for that work, to the amount of \$65 74

#### PUBLIC LIGHTS.

Bills approved on account of the public lights from January 1 to March 31, 1903, inclusive, amounted to \$72,317 25

Charged as follows :

---

Arc lights.....	\$54,606 60
Incandescent lights.....	11,320 53
Welsbach lights.....	5,898 92
Salaries.....	310 00
Gas for street lights.....	69 93
Setting and removing gas posts.....	67 31
Barn expenses.....	35 61
Horses, wagons, harnesses, etc.....	8 35
	<hr/>
	\$72,317 25

Bills deposited with the city treasurer for collection (for old iron and copper), from January 1 to March 31, 1903, inclusive, amounted to . . . . . \$133 07

During the quarter, coupons from bills collected (for old iron and copper sold), have been returned by the city treasurer and receipted for to the amount of . . . . . \$133 07

#### PUBLIC WORKS OFFICE.

Bills approved on account of the public works office from January 1 to March 31, 1903, inclusive, amounted to . . . . . \$7,154 44

Charged as follows:

Salaries of commissioner and secretary.....	\$1,925 00
Salaries of office assistants.....	3,363 41
Installation of card system.....	1,684 51
Office supplies.....	178 84
Telephone lines.....	2 68
	<hr/>
	\$7,154 44

ROBERT E. SMITH,  
*Commissioner.*



1903.]

CITY DOCUMENT.

[No. 17.]

EIGHTY-SECOND  
QUARTERLY REPORT

OF THE

Department of Public Works

OF THE

CITY OF PROVIDENCE, R. I.

QUARTER ENDING JUNE 30, 1903.



The Providence Press:  
SNOW & FARNHAM, CITY PRINTERS,  
63 Washington Street.  
1903.

VII



1908.]

CITY DOCUMENT.

[No. 17.]

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EIGHTY-SECOND  
QUARTERLY REPORT

OF THE

Department of Public Works

OF THE

CITY OF PROVIDENCE, R. I.

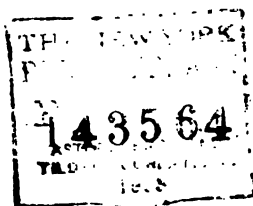
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QUARTER ENDING JUNE 30, 1903.



The Providence Press:  
SNOW & FARNHAM, CITY PRINTERS,  
63 Washington Street.  
1903.

VIII



# REPORT.

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OFFICE OF THE DEPARTMENT OF PUBLIC WORKS, }  
CITY HALL, PROVIDENCE, R. I., July 1, 1903. }

TO THE HONORABLE THE CITY COUNCIL:

In compliance with the requirements of Chapter 41 of the ordinances, the Commissioner of Public Works respectfully presents the eighty-second quarterly report of the expenditures by the several departments under his direction and control, with statements of work ordered and the condition and cost of same, for the quarter ending June 30, 1903.

## WATER WORKS.

May 1st, the proposal of John R. White & Son, Incorporated, to furnish and deliver at Pettaconset pumping station 500 tons Pocahontas coal at \$5.40 per ton of 2,200 pounds, was accepted.

June 17th, the proposal of Pocasset Ice Company to furnish ice for the public drinking fountains for the season of 1903, for two dollars per ton, was accepted.

The average daily consumption of water during the last quarter was 13,098,792 gallons.

Water pipes were laid during the quarter as follows:

16-INCH.

In River avenue ..... 2.56 feet.



**12-INCH.**

In River avenue ..... 1,287.23 feet.

**8-INCH.**

In Bath, Byfield, Calverley, Silver Spring and Veazie streets, and Branch avenue; and in Narragansett Boulevard in the town of Cranston ..... 4,680.25 feet.

**6-INCH.**

In Agnes, Barker, Calverley, Clarence, Cutler, Dike, East River, Faith, Jewett, Lamb, Moses Brown, Okie, Vandewater and West Park streets; Belair and Richfield avenues; and in Gladstone, Lawrence and Northup streets; Villa and Richfield avenues and Roland court in the town of Cranston ..... 4,791.55 feet.

Total ..... 10,761.59 feet.

or 2.038 + miles.

Water pipes were removed during the quarter as follows :

**6-INCH.**

From Grand and Veazie streets and Branch avenue ..... 1,729.36 feet.

or .327 + mile.

Statement of sizes and lengths of pipe laid since the commencement of the work :

36-inch .....	10,084.00 feet.
30-inch .....	61,328.30 feet.
24-inch .....	43,758.29 feet.
20-inch .....	9,626.59 feet.
16-inch .....	34,067.51 feet.
12-inch .....	104,715.96 feet.
10-inch .....	15,057.14 feet.
8-inch .....	289,173.77 feet.
6-inch .....	1,215,808.05 feet.

Total ..... 1,783,639.63 feet.

or, 337.810 + miles.

Statement of sizes and lengths of pipe laid for the special water service for fire protection since the commencement of the work :

---

24-inch .....	4,188.58 feet.
16-inch .....	23,004.37 feet.
12-inch .....	2,215.76 feet.
<hr/>	
Total .....	29,408.71 feet.

or, 5.569 + miles.

Ten fire hydrants have been set during the quarter, one in each of the following locations :

Belair avenue, east side, 186 feet south of south building line of Cypress street.

Branch avenue, south side, 13½ feet east of east building line of Veazie street.

Charles street, east side, on north building line of Ledge street.

Clarence street, north side, 247 feet west of west building line of Webster avenue.

Edith street, north side, 30 feet east of range of east building line of Leland street.

Promenade street, north side, 3½ feet east of east building line of Calverley street.

River avenue, east side, 1 foot south of south building line of Augusta street.

Veazie street, east side, 2 feet south of range of south building line of Houghton street.

Vandewater street, east side, south of south building line of Branch avenue.

West Park street, north side, 5 feet west of west building line of Aster street.

The total number of fire hydrants, exclusive of those for special service for fire protection, is now nineteen hundred and seventy-two — eighteen hundred and seventy-three flush, and ninety-nine post.

The total number of fire hydrants on the special water service for fire protection is ninety-two.

During the quarter, two hundred and seventeen water meters were set, of which number forty-six were to replace other meters. The use of four meters was discontinued.

The following meters were in use at the close of the quarter :

Kind.	Size.								Total.
	$\frac{1}{8}$ -in.	$\frac{1}{4}$ -in.	1-in.	1 $\frac{1}{2}$ -in.	2-in.	3-in.	4-in.	6-in.	
Ball & Fitts.....	2,239	458	110	11	5				2,823
Ball & Fitts, rotary.....			4	7		2	1		14
Crown.....	9,273	1,053	312	137	35	24	25	1	10,860
Empire.....	853	122	61	42	13	1	1		1,093
Fales, Jenks & Sons.....			1						1
Gem.....					13	28	16	3	60
Thomson.....	3,908	423	75	54	22	7	7	2	4,588
Trident.....	102		1						103
Worthington.....	1				1				2
	16,466	2,056	564	251	89	62	50	6	19,544

Nine plumbers' licenses were issued during the quarter, making the total number one hundred and twenty-nine, all of which expire December 31, 1903.

Six hundred and ninety-six permits to do plumbing were issued during the quarter.

One hundred and seventy-seven applications for water were made during the quarter, making the total number June 30, 1903, twenty-five thousand seven hundred and sixty-two.

The number of new service stops opened during the quarter was one hundred and eighty-eight.

The total number of service stops opened to June 30, 1903, inclusive, was twenty-five thousand and eighty-five. The number in actual use June 30, 1903, was twenty-three thousand one hundred and three.

The amount of bills approved on account of the water works, from April 1 to June 30, 1903, inclusive, was:

For maintenance, . . . . . \$34,983 93

Classified as follows :

PETTACONSET PUMPING STATION.

Coal and wood.....	\$3,932 50	
Fuel oil.....	1,382 18	
Sundries.....	652 76	
Engineers.....	580 12	
Firemen.....	526 30	
Superintendence.....	345 00	
Worthington high-duty engine.....	151 69	
Oil, waste and packing.....	139 67	
Care of grounds.....	123 05	
Labor on fuel.....	100 55	
Barn expenses.....	85 75	
Repairs on boilers.....	68 90	
Corliss pumping engine and house.....	19 95	
Cornish engine house.....	6 84	
Lights.....	3 00	
Real estate.....	30	
		\$8,138 56

SOCKANOSSET RESERVOIR.

Sundries.....	\$183 00	
Watchman.....	168 00	
		351 00

HOPE PUMPING STATION.

Coal and wood.....	\$659 34	
Firemen.....	472 50	
Engineers.....	276 00	
Holly pumping engine.....	85 91	
Lights.....	85 05	
Sundries.....	71 50	
Repairs on boilers.....	14 61	
Care of grounds.....	6 00	
		1,670 91

HOPE RESERVOIR.

Watchman.....	\$189 00	
Sundries.....	173 25	
		362 25

FRUIT HILL RESERVOIR.

Sundries.....	\$487 58	
Watchman.....	189 00	
		676 58
Amount carried forward.....		\$11,199 30

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Amount brought forward..... \$11,199 30

**METER DEPARTMENT.**

Water meters .....	\$2,618 41	
Setting and repairing meters.....	1,252 24	
		3,870 65

**PIPE LINE AND SERVICE STOPS.**

Repairs.....	\$3,902 03	
Superintendence — salaries .....	783 00	
		4,685 03

**PIPE YARD.**

Laying water pipe.....	\$3,671 64	
Fire hydrants, boxes and covers.....	2,412 75	
Special castings.....	1,713 99	
Laying service pipe.....	1,329 78	
Stop valves.....	761 25	
Taps and stops.....	695 45	
Labor on and carting pipe.....	262 45	
Tools .....	180 08	
Patterns for special castings.....	74 11	
Pipe yard, office expenses.....	25 98	
Pig lead and tin.....	2 14	
		11,129 62

**MISCELLANEOUS.**

Clerks' and inspectors' salaries .....	\$1,425 60	
Prevention of defilement of the Pawtuxet.....	733 32	
Barn expenses. ....	680 03	
Transferring water service records to card system.	444 65	
Sundries.....	328 13	
Horses, wagons, harnesses, etc.....	215 81	
Telephone lines.....	137 68	
Car fares. ....	100 00	
Public drinking fountains and troughs.....	34 11	
		4,099 33
		\$34,983 93

For construction, . . . . . \$13,645 41

**Charged as follows:**

Installation of sand filtration plant at Pettaconset. \$13,645 41

The total expenditures to June 30, 1903,  
inclusive, was . . . . . \$9,465,204 26

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The <i>net</i> expenditure for maintenance from April 1 to June 30, 1903, inclusive, was.....	\$27,106 67
The <i>net</i> expenditure for maintenance to June 30, 1903, inclusive, was.....	\$1,934,102 04
The <i>net</i> expenditure for construction from July 1, 1902, to June 30, 1903, inclusive, was.....	\$44,432 15

The value of the water works system, January 1, 1903, as estimated by the city engineer, was as follows:

Pettaconset pumping station.....	\$340,694 00	
Hope pumping station .....	129,405 79	
Sockanosset, Hope and Fruit Hill reservoirs.....	714,047 55	
Main lines and distribution pipes.....	2,726,775 16	
Real estate in Pawtuxet and Lincoln .....	15,975 00	
Tools and supplies.....	29,875 18	
		<hr/>
		\$3,956,772 68

Bills deposited with the city treasurer for collection from April 1 to June 30, 1903, inclusive, amounted to . . . \$79,124 37

As follows:

Water.....	\$70,987 47
Water meters.....	3,745 75
Labor and material, laying services, etc., .....	2,078 54
Setting and repairing meters.....	1,894 22
Repairs on pipe line .....	144 82
Rent of real estate .....	111 25
Penalties.....	76 00
Lead cross.....	61 32
Permanently closing service stops .....	25 00
	<hr/>
	\$79,124 37

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$79,954 80

As follows:

Water.....	\$71,999 54
Water meters.....	3,765 75
Labor and material, laying services, etc.....	2,273 03
Setting and repairing meters.....	1,542 00
Rent of real estate.....	143 00
Penalties.....	78 00
Repairs on pipe line.....	67 16
Lead cross.....	61 32
Permanently closing service stops .....	25 00
	<hr/>
	\$79,954 80

## SEWERS.

During the quarter ending June 30, 1903, two hundred and fifty-eight permits were issued to drain layers—one hundred and forty-one for new work and one hundred and seventeen for extension and repairs of drains.

Ten drain layers' licenses were issued during the quarter, making the total number one hundred and forty-three, all of which expire December 31, 1903.

June 25th, the proposal of the New England Steam Brick Company to furnish and deliver sewer brick for the improved sewerage system for the sum of \$10.50 per thousand, was accepted.

During the quarter, assessments for the cost of constructing sewers were certified to the city treasurer as follows :

Cemetery and Frost streets.....	\$4,805 84
Summit avenue, from Fourth street to Seventh.....	2,628 88
Tenth street, from North Main to Highland avenue. ....	2,010 43
North Main street, from the city line to Frost street.....	7,718 88
Seventh street, from Summit avenue to North Main street.....	3,514 62
Sears avenue, from Atwells to Rangeley.....	1,220 77
Woodbine and Gandview streets.....	5,705 14
Laurel Hill avenue, from Pocasset to Plainfield street.....	2,555 39
Unit street, from Maynard to Manton avenue.....	2,727 96
Smithfield and Branch avenues.....	4,756 19
Oxford street, from near Eddy to Allens avenue.....	3,566 20
Hamilton, Irving and Melrose streets.....	151 42
Total.....	\$41,361 72

April 14th, a contract for the construction of the following sewer was awarded and subsequently executed, namely :

[ The amounts given below are what are estimated will be paid the contractors for labor, and do not include the cost of inspection and materials, or rock excavation.]

## TO FREDERICK E. SHAW.

No. of resolution. Date of approval.

132. April 7, 1903, *Branch avenue, from  
Veazie street to the  
river,— storm sewer, Im-  
proved Sewerage System,* \$8,518 50

April 28th, contracts for the construction of the following sewers were awarded and subsequently executed, namely :

TO FREDERICK E. SHAW.

No. of resolution. Date of approval.

127.	April 7, 1903,	<i>Atwells avenue, Pine and Broad streets,</i>	\$2,518 40
129.	" " "	<i>Weymouth street and Lloyd avenue,</i>	1,775 00
130.	" " "	<i>Wayland, Cole and University avenues,</i>	3,584 40
131.	" " "	<i>Branch avenue, from near Langdon street to near the Moshassuck river,</i>	5,111 05
133.	" " "	<i>Charles street, from near Amboy to Branch avenue,</i>	4,075 90
134.	" " "	<i>Silver Spring street and Northup avenue,</i>	4,735 30

May 1st, contracts for the construction of the following sewers were awarded and subsequently executed, namely :

TO TIMOTHY F. LYONS.

No. of resolution. Date of approval.

128.	April 7, 1903,	<i>Merino avenue, from Manton avenue to near Merino bridge,</i>	\$4,183 30
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TO GEORGE R. NEWMAN.

136.	April 7, 1903,	<i>Section 30, Seekonk Division, Improved Sewerage System.—In Butler Hospital grounds,</i>	\$24,895 50
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During the quarter, the construction of the following sewers was completed, namely :



No. of resolution.	Date of approval.		Date of completion.
572.	Dec. 20, 1895,	<i>Section 28, Moshassuck Division, Improved Sewerage System,</i>	June 17, 1903.
381.	Oct. 4, 1901,	<i>Section 27, Moshassuck Division, Improved Sewerage System,</i>	May 16, 1903.
196.	June 6, 1902,	<i>India and South Main streets, Improved Sewerage System,</i>	April 16, 1903.
349.	Nov. 6, “	<i>Algonquin street, Reservoir avenue and right of way,</i>	May 26, 1903.
351.	“ “ “	<i>Cemetery street, from North Main to Frost,</i>	May 11, 1903.
353.	“ “ “	<i>Jewett street, from Valley 510 feet easterly,</i>	April 21, 1903.
355.	“ “ “	<i>Wallace street, from near Webster avenue to Priscilla,</i>	April 11, 1903.

At the close of the quarter, work upon the following sewers of the improved sewerage system was in progress, namely:

No. of resolution.	Date of approval.	
132.	April 7, 1903,	<i>Branch avenue, from Veazie street to the river,—storm sewer.</i>
136.	“ “ “	<i>Section 30, Seekonk Division, Improved Sewerage System.</i>

Work upon the following lateral sewers was in progress at the close of the quarter, namely:

No. of resolution.	Date of approval.	
350.	Nov. 6, 1902,	<i>Branch avenue, from Douglas to Veazie street.</i>
133.	April 7, 1903,	<i>Charles street, from near Amboy to Branch avenue.</i>

No. of resolution. Date of approval.

134. April 7, 1903, *Silver Spring street and Northup avenue.*

Work upon the following sewers, completing the work ordered by the city council, had not commenced June 30, 1903, namely:

No. of resolution. Date of approval.

127. April 7, 1903, *Atwells avenue, Pine and Broad streets.*

128. " " " *Merino avenue, from Manton to near the Merino bridge.*

129. " " " *Weymouth street and Lloyd avenue.*

130. " " " *Wayland, Cole and University avenues.*

131. " " " *Branch avenue, from near Langdon street to near the Moshassuck river.*

228. June 5, " *North Main street, east side, from Stenton avenue to Third street.*

229. " " " *Reservoir avenue, west side, from Crescent street to Algonquin.*

230. " " " *West Park and Bath streets.*

The amount of bills approved on account of sewers from April 1 to June 30, 1903, inclusive, was as follows:

FOR CONSTRUCTION.

Regular appropriation.....	\$31,796 71	
Improved sewerage appropriation. ....	57,703 05	
		\$89,499 76

Charged as follows:

Material.....	\$17,365 24
Contract reservations.....	853 00
Additional catch-basins.....	342 80
Testing cement.....	252 71
Sundries.....	131 18
Patterns for sewer castings.....	83 63
Tools.....	7 23
Sewer in Algonquin street and Reservoir avenue..	2,345 99
Amount carried forward.....	\$21,381 78

Amount brought forward.....	\$21,381 78
Sewer in Branch avenue, from Douglas to Veazie street.....	4,573 21
Sewer in Cemetery street, from North Main to Frost	1,871 28
Sewer in Charles street, from near Amboy to Branch avenue.....	6,025 16
Sewer in Doane and Everett avenues.....	427 51
Sewer in Jewett street, from Valley about 510 feet easterly .....	642 78
Sewer in Silver Spring street and Northup avenue.	1,858 26
Sewer in Tuxedo and Regent avenues.....	10 19
Sewer in Wallace street, from near Webster avenue to Priscilla. ....	507 07
Sewer in Branch avenue from Veazie street to the river, near Vandewater street.....	11,184 94
Sewer in Moshassuck Division, Section 27.....	17,765 58
Sewer in Moshassuck Division, Section 28.....	15,928 92
Sewer in Seekonk Division, Section 29.....	2,085 15
Sewer in Seekonk Division, Section 30.....	5,237 93
	<u>\$89,499 76</u>

For maintenance, . . . . . \$30,560 96

Classified as follows:

Cleaning basins and sewers.....	\$5,804 89
Repairing basins and sewers.....	4,940 70
Cleaning and repairing old drains.....	2,216 88
Sundries.....	784 94
Inspection of connections.....	651 87
Barn expenses.....	456 80
Horses, wagons, harnesses, etc.....	440 92
Tools.....	437 15
Superintendent's salary.....	408 00
Cleaning private connections.....	56 00
Telephone lines.....	35 93
Office expenses.....	20 09
Car fares.....	10 00
Filling cisterns.....	8 00

ERNEST STREET STATION.

Coal and wood .....	1,850 76
Engineers .....	818 20
Cleaning screens.....	626 99
Firemen .....	411 67
Cleaning and repairing pumps.....	285 10
Supplies.....	109 26
Care of grounds .....	93 92
Repairs on engines.....	26 51
Lights.....	22 86
Repairs on buildings.....	15 89

## SEWAGE PRECIPITATION TANKS.

Chemicals.....	\$5,033 28
Labor in sludge disposal.....	2,278 95
Labor on sewage precipitation.....	1,519 30
Electrical power.....	526 00
Repairs on buildings.....	200 09
Repairs on machinery.....	173 74
Miscellaneous supplies.....	133 51
Fuel.....	87 55
Repairs on tanks.....	61 05
Lights.....	14 16
	<hr/>
	\$30,560 96

The *net* expenditure for construction of sewers to June 30, 1903, inclusive, was..... \$7,403,809 87

The *net* expenditure for maintenance of sewers to June 30, 1903, inclusive, was..... \$979,618 48

Bills deposited with the city treasurer for collection from April 1 to June 30, 1903, inclusive, amounted to . . . \$895 42

As follows:

Miscellaneous work.....	\$487 82
Cleaning private connections.....	74 00
Empty oil barrels.....	11 90
Filling cisterns, etc.....	9 50
Sewer material.....	265 48
Laying drains to curb.....	46 72
	<hr/>
	\$895 42

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of . . . \$630 40

As follows:

Miscellaneous work.....	\$223 13
Cleaning private connections.....	74 25
Empty oil barrels.....	11 90
Filling cisterns, etc.....	9 75
Sewer material.....	264 65
Laying drains to curbstone.....	46 72
	<hr/>
	\$630 40

## HIGHWAYS.

Two permits to open streets were issued during the quarter.

June 26th, the proposal of James A. Potter & Co. to furnish and deliver 42,000 feet B. M. yellow pine plank for the highway barn for the sum of \$25.50 per thousand feet, was accepted.

May 26th, statements of the cost of concreting sidewalks in sundry streets, with ten per centum added to cover the cost of assessing and collecting, were certified to the assessors of taxes, aggregating the sum of \$1,332.77.

A statement has been prepared of the cost of curbstones set, ascertained by the commissioner and certified to the board of aldermen for approval, as follows:

Douglas avenue from end of curbing near Chad Brown street to	
Admiral street.....	\$3,911 34

During the quarter, the following work was completed:

### SIDEWALKS TO BE CURBED AND GUTTERS PAVED.

Date of order.

May 16,	1901,	<i>Douglas avenue, from Chad Brown street to Admiral.</i>
Oct. 16,	1902,	<i>Laurel Hill avenue, from end of curbing to Pocasset avenue.</i>
" "	"	<i>Bolander street, from Abbott to Grandview.</i>
Nov. 20,	"	<i>Phillips street, from Hope to Morris avenue.</i>
" "	"	<i>Suffolk street, from Admiral to Salina.</i>
Dec. 18,	"	<i>Lenox avenue, from Melrose street to Hamilton.</i>
" "	"	<i>Hamlin street from Roger Williams park to Elmwood avenue.</i>
" "	"	<i>Sears avenue, from Atwells to its northerly termination.</i>

Date of order.

- April 16, 1903, *Moses Brown street, from Angell to South Angell.*  
 " " " *Promenade street, north side, from Leland to Calverly.*  
 May 21, " *Hazael street, from Douglas avenue to General street.*  
 " " " *Tuxedo avenue, from Amherst street to Atwells avenue.*

TO GRADE AND BUILD.

No. of resolution. Date of approval.

232. July 7, 1902, *Manton avenue, from Unit street to Chalkstone avenue.*

The following work was in progress June 30, 1903, namely:

SIDEWALKS TO BE CURBED AND GUTTERS PAVED.

Date of order.

- June 18, 1903, *Wallace street, from Webster avenue to Priscilla.*

TO GRADE AND PUT IN GOOD CONDITION.

- June 18, 1903, *Hastings and Ledge streets.*

The following work, ordered by the board of aldermen and city council, had not commenced June 30, 1903, namely:

SIDEWALKS TO BE CURBED AND GUTTERS PAVED.

Date of order.

- Nov. 20, 1902, *Egan street, from Manton avenue to the bridge.*  
 June 18, 1903, *Bath street, from Orms to Calverley.*  
 " " " *Calais street, from Jewett to West Park.*

## Date of order.

June 18, 1903, *Silver Spring street, from Ashton to Northup avenue.*

“ “ “ *Wayland avenue, from Lloyd to Irving.*

“ “ “ *Cole avenue, from Lloyd to Irving.*

“ “ “ *University avenue, from Elmgrove to Slater.*

## TO BE PAVED.

## No. of resolution. Date of approval.

231. June 5, 1903, *Branch avenue, from Veazie street to bridge near Vandewater.*

Bills approved on account of highways  
from April 1 to June 30, 1903, inclusive,  
amounted to :

Regular appropriation .....	\$84,591 93	
Special appropriation.....	1,855 05	
		<u>\$86,446 98</u>

## Classified as follows :

Cleaning streets.....	\$18,350 63
Repairs on unpaved streets .....	15,827 97
Crushed stone—material and labor.....	9,082 28
Stone—paving and crosswalk.....	5,285 40
Repairs on paved streets. ....	4,225 09
Barn expenses .....	2,878 91
Blacksmith and wheelwright shop.....	2,431 76
Building driveways, etc.....	882 76
Tools, implements, etc.....	788 27
Steam rollers—repairs and supplies.....	684 61
Labor on material.....	615 50
Watering streets.....	452 13
Superintendent's salary.....	442 00
Horses, wagons, harnesses, etc.....	223 30
Repairs on stone crushers.....	187 02
Watchman at city yard .....	156 00
Sundries .....	104 89
Office expenses, city yard.....	67 22
Car fares.....	25 00
Fencing streets—material and labor .....	24 40
Telephone lines.....	5 35
Repairs on buildings, highway yard.....	2 10
Amount carried forward.....	<u>\$62,742 59</u>

Amount brought forward.....	\$62,742 59
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### NEW WORK—BUILDING AND REBUILD- ING STREETS, ETC.

#### SIDEWALKS CURBED AND GUTTERS PAVED.

<i>Bolander street</i> , from Abbott to Grandview.....	\$1,430 71	
<i>Douglas avenue</i> , from Chad Brown street to Ad- miral.....	1,855 05	
<i>Grandview street</i> , from Knowles to North Main....	984 76	
<i>Hanlin street</i> , from Roger Williams Park to Elm- wood avenue.....	950 09	
<i>Hazuel street</i> , from Douglas avenue to General street.....	773 90	
<i>Laurel Hill avenue</i> , from present end of curb to Pocasset avenue.....	869 96	
<i>Lenox avenue</i> , from Melrose street to Hamilton....	745 90	
<i>Moses Brown street</i> , from Angell to South Angell..	1,078 54	
<i>Oriole avenue</i> , from end of curb to Rhode Island avenue, and in Rhode Island avenue from Oriole to Angell street.....	153 68	
<i>Phillips street</i> , from Hope to Morris avenue.....	1,028 55	
<i>Primrose street</i> , from Vinton to Vernon.....	283 91	
<i>Promenade street</i> , north side, from Leland to Cal- verley.....	1,452 52	
<i>Sears avenue</i> , from Atwells to its northerly ter- mination.....	1,316 92	
<i>Suffolk street</i> , from Admiral to Salina.....	893 73	
<i>Tuxedo avenue</i> , from Amherst street to Atwells avenue.....	1,037 23	
<i>Wallace street</i> , from Webster avenue to Priscilla...	125 30	
		14,980 75

#### TO GRADE.

<i>Manton avenue</i> , from Unit street to Chalkstone avenue.....	4,253 55
--	----------

#### TO GRADE AND PUT IN GOOD CONDITION.

<i>Hastings and Ledge streets</i> .....	4,470 09
	\$86,446 98

Bills deposited with the city treasurer  
for collection from April 1 to June 30,  
1903, inclusive, amounted to . . . \$3,556 91

As follows :



---

Labor and material.....	\$2,738 31
Street sweepings.....	404 30
Boarding horses for other departments.....	281 40
Manure from barn.....	72 00
Removing trees.....	28 50
Repairing buggy.....	15 00
Discharging cargoes at city wharf.....	9 00
Empty oil barrels.....	8 40
	<hr/>
	\$3,556 91

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$2,459 62

As follows :

Labor and material.....	\$1,095 99
Blacksmith and harness work for other departments.....	536 38
Street sweepings.....	422 40
Boarding horses for other departments.....	281 40
Manure from barn.....	72 00
Removing trees.....	28 50
Discharging cargoes at city wharf.....	18 75
Empty oil barrels.....	4 20
	<hr/>
	\$2,459 62

### SIDEWALKS AND CURBING.

Bills approved on account of sidewalks and curbing from April 1 to June 30, 1903, inclusive, amounted to \$6,068 19

Charged as follows :

Granite curbing.....	\$3,602 34
Concreting sidewalks.....	1,354 06
Repairing sidewalks and gutters.....	1,111 79
	<hr/>
	\$6,068 19

Curbing bills deposited with the city treasurer for collection from April 1 to June 30, 1903, inclusive, amounted to . \$4,503 70

During the quarter, coupons from curbing bills have been returned by the city treasurer and receipted for to the amount of \$3,467 75

### CITY ENGINEER.

Bills approved on account of the city engineer's department from April 1 to June 30, 1903, inclusive, amounted to . \$11,170 67

#### Charged as follows:

Salary of city engineer.....	\$1,125 00
Salaries of assistants.....	8,555 22
Salaries of clerks.....	729 00
Car fares.....	406 10
Supplies — drawing material, etc.....	235 37
Instruments and repairs.....	86 40
Meteorological instruments and repairs.....	30 50
Telephone lines.....	2 68
Sundries.....	40
	<hr/>
	\$11,170 67

### BRIDGES.

April 20th, the proposal of Charles Cranshaw to build the abutment and wing walls for the Adelaide avenue bridge over the tracks of the New York, New Haven and Hartford Railroad Company, was accepted and a contract subsequently executed. Amount, \$4,219.65.

May 7th, the proposal of Frank Slavin to grade Merino avenue, at the Merino bridge, was accepted.

May 13th, the proposal of E. D. F. Titus to move and relocate buildings and fences on the estate of Patrick Costello, Merino avenue, was accepted. Amount, \$650.00.

June 12th, the proposal of E. D. F. Titus to move and relocate buildings on the estate of Timothy S. Farrell heirs, Merino avenue, was accepted. Amount, \$650.

June 18th, the proposal of William M. Harris, Jr., to furnish white spruce plank, nine-inch widths, at \$20.90 per M. feet, and ten-inch and twelve inch widths at \$22.90 per M. feet, was accepted.

June 18th, the proposal of George A. Keach & Son to furnish white oak plank at \$27.00 per M. feet, was accepted.

The following work was in progress at the end of the quarter, namely:

#### TO BUILD BRIDGE AND APPROACHES.

No. of resolution. Date of approval.

220. June 20, 1902, *Over Woonasquatucket river at Egan and Chatlett streets.*

411. Dec. 19, " *Exchange bridge on its northerly side; bridge over the river between Exchange and Burnside bridges; River walls between Burnside and Exchange bridges.*

73. March 3, 1903, *Adelaide avenue, abutments for bridge over tracks of N. Y., N. H. and H. R. R. Co.*

Bills approved on account of bridges from  
April 1 to June 30, 1903, inclusive,  
amounted to . . . . . \$6,523 97

Charged as follows:

Adelaide avenue, bridge abutments—to build....	\$2,321 62
Barn expenses.....	113 64
Building at city yard.....	31
Cemetery street bridge.....	10 38
Crawford street bridge.....	156 12
Eagle street bridge.....	6 34
Francis street bridge.....	21 30
Geneva bridge.....	4 20
Hawkins street bridge.....	1 85
Horses, wagons, harnesses, etc.....	43 53
Lumber, hardware, etc.....	182 99
Park street bridge.....	1 70
Point street bridge.....	283 82
Red bridge.....	314 96
Rent of keeper's house—Washington bridge.....	36 00
Salaries—Point street bridge.....	978 25
Salaries—Red bridge.....	513 50
Salaries—Washington bridge.....	503 50
Smith street bridge.....	5 20
Stevens street bridge.....	7 15
Sundries.....	62 17
Telephone lines.....	2 68
Tools.....	89 37
Valley street bridge—north span.....	58 10
Valley street bridge—south span.....	39 86
Veazie street bridge.....	6 30
Washington bridge.....	759 13
	<hr/>
	\$6,523 97

Bills approved for account of building the Merino bridge, from April 1 to June 31, 1903, inclusive, have been paid from the special appropriation for that work, to the amount of . . . . . \$8,876 30

Bills approved for account of building the river walls between the Burnside and Exchange bridges, from April 1 to June 30, 1903, inclusive, have been paid from the special appropriation for that work, to the amount of . . . . . \$467 79

Bills deposited with the city treasurer for collection from April 1 to June 30, 1903, inclusive, for cement barrels sold, amounted to . . . . . 50

During the quarter, coupons from bills collected for cement barrels sold, have been returned by the city treasurer and receipted for to the amount of . . . 50

### PUBLIC LIGHTS.

Bills approved on account of the public lights from April 1 to June 30, 1903, inclusive, amounted to . . . \$72,543 95

#### Charged as follows:

Arc lights.....	\$54,482 06
Incandescent lights.....	11,729 27
Welsbach lights.....	5,970 75
Salaries.....	180 00
Barn expenses.....	72 97
Setting and removing gas posts.....	55 32
Gas for street lights.....	51 87
Horses, wagons, harnesses, etc.....	1 71
	<hr/>
	\$72,543 95

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$11 18

#### As follows:

Setting and removing gas posts.....	\$9 18
Common lanterns.....	2 00
	<hr/>
	\$11 18

## PUBLIC WORKS OFFICE.

Bills approved on account of the public  
works office from April 1 to June 30,  
1903, inclusive, amounted to . . . \$5,200 03

## Charged as follows:

Salaries of commissioner and secretary.....	\$1,970 00
Salaries of office assistants.....	2,839 92
Installation of card system.....	312 18
Office supplies.....	75 25
Telephone lines.....	2 68
	<hr/>
	\$5,200 03

WALTER F. SLADE,  
*Commissioner.*

During the quarter, coupons from bills collected for cement barrels sold, have been returned by the city treasurer and receipted for to the amount of . . .

50

### PUBLIC LIGHTS.

Bills approved on account of the public lights from April 1 to June 30, 1903, inclusive, amounted to . . .

\$72,548 95

#### Charged as follows:

Arc lights	\$54,482 06
Incandescent lights	11,729 27
Welsbach lights	5,970 73
Salaries	180 00
Rent expenses	72 97
Setting and removing gas posts	53 32
Gas for street lights	31 87
Horses, wagons, harnesses, etc.	1 71
	<hr/>
	\$72,543 95

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of

\$11 18

#### As follows:

Salaries	\$4 15
Gas for street lights	1 00
	<hr/>
	\$5 15

PUBLIC WORKS OFFICE.

Bills approved on account of the public  
works office from April 1 to June 30,  
1903, inclusive, amounted to . . . \$5,200 03

Charged as follows:

Salaries of commissioner and secretary.....	\$1,970 00
Salaries of office assistants.....	2,839 92
Installation of card system.....	312 18
Office supplies.....	75 25
Telephone lines.....	2 68
	<hr/>
	\$5,200 03

WALTER F. SLADE,  
*Commissioner.*







1903.]

CITY DOCUMENT.

[No. 20,

EIGHTY-THIRD  
QUARTERLY REPORT

OF THE

Department of Public Works

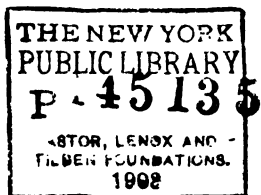
OF THE

CITY OF PROVIDENCE, R. I.

QUARTER ENDING SEPTEMBER 30, 1903.



The Providence Press:  
SNOW & FARNHAM, CITY PRINTERS,  
63 Washington Street.  
1903.



# REPORT.

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OFFICE OF THE DEPARTMENT OF PUBLIC WORKS, }  
CITY HALL, PROVIDENCE, R. I., October 1, 1903. }

TO THE HONORABLE THE CITY COUNCIL:

In compliance with the requirements of Chapter 41 of the ordinances, the Commissioner of Public Works respectfully presents the eighty-third quarterly report of the expenditures by the several departments under his direction and control, with statements of work ordered and the condition and cost of same, for the quarter ending September 30, 1903.

## WATER WORKS.

August 18th, the proposal of the Eastern Coal Company to furnish and deliver at Pettaconset pumping station 3,000 tons of Georges Creek Cumberland coal at \$4.60 per ton, was accepted.

August 18th, the proposal of John R. White & Son, Incorporated, to furnish and deliver at their yard the anthracite coal needed to June 1, 1904, at \$5.40 per ton, was accepted.

September 2nd, the proposal of the Providence Coal Company to furnish and deliver at Hope pumping station, 500 tons of anthracite coal of No. 2 buckwheat size at \$2.40 per ton, was accepted.

September 25th, the proposal of the Coffin Valve Company to furnish and deliver 50 six-inch water gates, Providence pattern, at \$17.75 each, and 20 eight-inch gates, same pattern, at \$26.50 each, was accepted.

The average daily consumption of water during the last quarter was 13,400,379 gallons.

Water pipes were laid during the quarter as follows :

8-INCH.

In Promenade and Silver Spring streets ; Northup and Sunset avenues ; and in Dyer and Pawtuxet avenues in the town of Cranston..... 859.07 feet.

6-INCH.

In Ashton, Barker, Bernard, Chad Brown, Dante, Dora, Grover, Ledge, Moy, O'Connell, Rugby, Sayles, Stanhope and Waterloo streets ; Cole, Everett, Pavilion, Silver Lake and University avenues ; and in Sefton Drive ; Bay View, Edgewood, Meadow, Sylvan and Warwick avenues in the town of Cranston..... 7,726.57 feet.

Total..... 8,585.64 feet.  
or 1.626 + miles.

Statement of sizes and lengths of pipe laid since the commencement of the work :

36-inch .....	10,064.00 feet.
30-inch .....	61,328.30 feet.
24-inch .....	43,758.29 feet.
20-inch .....	9,626.59 feet.
16-inch .....	34,087.51 feet.
12-inch .....	104,715.98 feet.
10-inch .....	15,057.14 feet.
8-inch .....	290,032.84 feet.
6-inch .....	1,223,534.62 feet.

Total..... 1,792,225.27 feet.  
or, 339.436 + miles.

Statement of sizes and lengths of pipe laid for the special water service for fire protection since the commencement of the work :

24-inch .....	4,188.58 feet.
16-inch .....	23,004.37 feet.
12-inch .....	2,215.76 feet.

Total..... 29,408.71 feet.  
or, 5.569 + miles.

Six fire hydrants have been set during the quarter, one in each of the following locations :

Agnes street, east side, 101 feet north of north building line of Oak street.  
Brown University, back campus, on range of east line of Engineering building, 88 feet north of said building.

Chad Brown street, north side, 408 feet east of Douglas avenue.

Pawtuxet avenue, Cranston, east side, 25 feet south of south building line of Armington street.

Sefton Drive, Cranston, north side, 382 feet west of west building line of Narragansett Boulevard,

Waterloo street, north side, 269 feet west of west building line of Dexter street.

The total number of fire hydrants, exclusive of those for special service for fire protection, is now nineteen hundred and seventy-eight—eighteen hundred and seventy-seven flush, and one hundred and one post.

The total number of fire hydrants on the special water service for fire protection is ninety-two.

During the quarter, one hundred and eighty water meters were set, of which number thirty-eight were to replace other meters. The use of sixteen meters was discontinued.

The following meters were in use at the close of the quarter:

KIND.	SIZE.									Total.
	$\frac{1}{2}$ -in.	$\frac{3}{4}$ -in.	1-in.	1 $\frac{1}{2}$ -in.	2-in.	3-in.	4-in.	6-in.	8-in.	
Ball & Fitts.....	2,308	448	108	11	5					2,780
Ball & Fitts, rotary....			4	7		2	1			14
Crown.....	9,311	1,064	317	138	35	24	25	1		10,915
Empire.....	889	127	61	44	13	1	1			1,136
Fales, Jenks & Sons....			1							
Gem.....					13	28	16	3		60
Thomson.....	4,068	423	75	54	22	7	7	2		4,658
Trident.....	102		1							103
Venturi.....									1	1
Worthington.....	1				1					2
	16,579	2,062	567	254	89	62	50	6	1	19,670

Two plumbers' licenses were issued during the quarter, making the total number one hundred and thirty-one, all of which expire December 31, 1903.

Six hundred and fifty-four permits to do plumbing were issued during the quarter.

One hundred and seventy-two applications for water were made during the quarter, making the total number September 30, 1903, twenty-five thousand nine hundred and thirty-four.

The number of new service stops opened during the quarter was one hundred and eighty-eight.

The total number of service stops opened to September 30, 1903, inclusive, was twenty-five thousand two hundred and seventy-three. The number in actual use September 30, 1903, was twenty-three thousand three hundred and thirty-one.

The amount of bills approved on account of water works from July 1 to September 30, 1903, inclusive, was:

For maintenance. . . . . \$31,960 97

Classified as follows:

PETTACONSET PUMPING STATION.

Coal and wood.....	\$7,185 68	
Engineers.....	746 42	
Sundries.....	704 58	
Firemen.....	651 90	
Superintendence.....	390 18	
Care of grounds.....	115 10	
Repairs on boilers.....	93 99	
Oil, waste and packing.....	77 05	
Labor on fuel.....	75 35	
Barn expenses.....	58 31	
Worthington high-duty engine.....	45 78	
Cornish engine house.....	19 46	
Real estate at Pettaconset.....	18 50	
Corliss pumping engine and house.....	2 50	
Lights.....	2 22	
		10,187 02
Amount carried forward.....		\$10,187 02



# REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 7

Amount brought forward.....		\$10,187 02
<b>SOCKANOSSET RESERVOIR.</b>		
Watchman.....	\$190 00	
Sundries.....	49 40	
		239 40
<b>HOPE PUMPING STATION.</b>		
Coal and wood.....	\$473 16	
Firemen.....	461 40	
Repairs on boilers.....	340 94	
Engineers.....	312 14	
Sundries.....	279 75	
Lights.....	73 50	
		1,940 89
<b>HOPE RESERVOIR.</b>		
Watchman.....	\$213 75	
Sundries.....	81 47	
		295 22
<b>FRUIT HILL RESERVOIR.</b>		
Sundries.....	\$488 23	
Watchman.....	213 75	
		701 98
<b>METER DEPARTMENT.</b>		
Water meters.....	\$2,528 71	
Setting and repairing meters.....	1,130 65	
		3,659 36
<b>PIPE LINE AND SERVICE STOPS.</b>		
Repairs.....	\$4,861 36	
Superintendence — salaries.....	885 53	
		5,746 89
<b>PIPE YARD.</b>		
Laying water pipe.....	\$2,617 10	
Laying service pipe.....	1,434 53	
Special castings.....	578 44	
Labor on and carting pipe.....	119 25	
Tools.....	54 79	
Fire hydrants, boxes and covers.....	20 60	
Taps and stops.....	11 14	
Office expenses.....	6 30	
Patterns for special castings.....	2 38	
		4,844 53
Amount carried forward.....		\$27,615 29

Amount brought forward.....		\$27,615 29
<b>MISCELLANEOUS.</b>		
Clerks' and inspectors' salaries.....	\$1,612 29	
Barn expenses.....	1,210 12	
Prevention of defilement of the Pawtuxet.....	549 99	
Transferring water service records to card system.....	314 30	
Horses, wagons, harnesses, etc.....	217 73	
Telephone lines.....	137 68	
Inspection of water pipes with reference to elec- trolysis.....	103 50	
Sundries.....	83 86	
Car fares.....	50 00	
Public drinking fountains and troughs.....	38 71	
Real estate in Lincoln.....	27 50	
		<u>4,345 68</u>
		\$31,960 97

For construction, . . . . . \$18,412 37

Charged as follows:

Installation of sand filtration plant at Pettaconset. \$18,412 37

The total expenditures to September 30,  
1903, inclusive, was . . . . . \$9,515,577 60

The *net* expenditure for maintenance from July 1 to  
September 30, 1903, inclusive, was..... \$24,354 66

The *net* expenditure for maintenance to September 30, 1903,  
inclusive, was..... \$1,958,456 70

The *net* expenditure for construction from July 1 to Septem-  
ber 30, 1903, inclusive, was..... \$18,412 37

The value of the water works system,  
January 1, 1903, as estimated by the city  
engineer, was as follows:

Pettaconset pumping station.....	\$340,694 00	
Hope pumping station .....	129,405 79	
Sockanosset, Hope and Fruit Hill reservoirs.....	714,047 53	
Main lines and distribution pipes.....	2,726,775 16	
Real estate in Pawtuxet and Lincoln .....	15,975 00	
Tools and supplies.....	29,875 18	
		<u>\$3,906,772 68</u>

Bills deposited with the city treasurer  
for collection from July 1 to September 30,  
1903, inclusive, amounted to . . . \$78,374 37

As follows :

Water.....	\$69,510 10	
Labor and material, laying services, etc., .....	3,455 24	
Water meters.....	2,684 75	
Setting and repairing meters.....	1,694 18	
Building subway for Butler Exchange Company..	429 83	
Old scrap iron.....	364 86	
Rent of real estate .....	107 25	
Repairs on pipe line .....	55 99	
Penalties.....	48 00	
Permanently closing service stops.....	15 00	
Repairing hot water tank for the highway depart- ment.....	6 17	
Repairs on buggy.....	3 00	
		\$78,374 37

During the quarter, coupons from bills  
collected have been returned by the city  
treasurer and receipted for to the amount of \$78,718 21

As follows :

Water.....	\$71,063 90	
Water meters.....	2,713 75	
Labor and material, laying services, etc.....	2,546 96	
Setting and repairing meters.....	1,632 65	
Old scrap iron.....	364 86	
Repairs on pipe line.....	267 59	
Rent of real estate.....	75 50	
Penalties.....	48 00	
Permanently closing service stops.....	5 00	
		\$78,718 21

The amount of bills approved on account  
of water works for the fiscal year ending  
September 30, 1903, inclusive, was :

For maintenance, . . . . \$162,156 74

Classified as follows :

## PETTACONSET PUMPING STATION.

Fuel oil.....	\$15,539 42	
Coal and wood.....	13,235 57	
Sundries.....	2,844 25	
Engineers.....	2,492 69	
Firemen.....	2,104 75	
Superintendence.....	1,421 07	
Installation of fuel oil.....	1,117 94	
Barn expenses.....	558 47	
Worthington high-duty engine.....	555 90	
Labor on fuel.....	538 75	
Care of grounds.....	522 68	
Repairs on boilers.....	458 66	
Oil, waste and packing.....	378 01	
Real estate.....	63 30	
Corliss pumping engine and house.....	53 19	
Lights.....	38 16	
Cornish engine house.....	26 30	
		\$41,949 11

## SOCKANOSSET RESERVOIR.

Watchman.....	\$730 00	
Sundries.....	484 44	
		1,214 44

## HOPE PUMPING STATION.

Coal and wood.....	\$2,001 35	
Firemen.....	1,739 70	
Engineers.....	1,199 28	
Sundries.....	420 29	
Repairs on boilers.....	357 88	
Lights.....	289 80	
Holly pumping engine.....	85 91	
Care of grounds.....	34 25	
Oil, waste and packing.....	1 35	
		6,129 81

## HOPE RESERVOIR.

Watchman.....	\$821 25	
Sundries.....	338 25	
		1,159 50

## FRUIT HILL RESERVOIR.

Sundries.....	\$1,430 64	
Watchman.....	821 25	
		2,251 89

Amount carried forward..... \$52,704 75

# REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 11

Amount brought forward..... \$52,704 75

## METER DEPARTMENT.

Water meters .....	\$12,709 53	
Setting and repairing meters.....	4,890 35	17,599 88

## PIPE LINE AND SERVICE STOPS.

Repairs.....	\$15,800 46	
Superintendence — salaries .....	3,405 71	19,206 17

## PIPE YARD.

Cast iron water pipe.....	\$19,007 94	
Laying water pipe.....	11,670 43	
Laying service pipe.....	5,108 79	
Special castings.....	4,065 91	
Fire hydrants, boxes and covers.....	2,996 19	
Service pipe.....	2,496 36	
Stop valves.....	1,441 20	
Taps and stops.....	1,306 71	
Labor on and carting pipe.....	846 16	
Pig lead and tin.....	766 18	
Tools.....	521 41	
Pipe yard, office expenses.....	152 16	
Patterns for special castings.....	76 49	
Repairs on pipe yard buildings.....	15 40	50,471 33

## MISCELLANEOUS.

Town of Cranston, tax.....	\$7,077 69	
Clerks' and inspectors' salaries .....	6,194 58	
Barn expenses.....	3,212 20	
Prevention of defilement of the Pawtuxet.....	2,102 15	
Transferring water service records to card system.....	758 95	
Horses, wagons, harnesses, etc.....	716 38	
Telephone lines.....	550 72	
Sundries.....	411 99	
Town of North Providence, tax.....	400 00	
Car fares.....	375 00	
Inspection of water pipe with reference to electrolysis .....	153 60	
Public drinking fountains and troughs.....	103 35	
Real estate at Pawtuxet.....	63 00	
Real estate at Lincoln.....	55 00	22,174 61

\$162,156 74

For construction, . . . . . \$59,624 26

Charged as follows:

Installation of sand filtration plant at Pettaconset. \$59,624 26

### SEWERS.

During the quarter ending September 30, 1903, three hundred and forty-one permits were issued to drain layers — one hundred and eighty-five for new work and one hundred and fifty-six for extension and repairs of drains.

Two drain layers' licenses were issued during the quarter, making the total number one hundred and forty-five, all of which expire December 31, 1903.

July 11th, the proposal of Frederick E. Shaw to furnish and deliver fifteen and twelve inch sewer pipe was accepted.

July 16th, the proposal of J. H. Lane and Company to furnish and deliver ten thousand yards No. 13 chain cloth for 24 $\frac{3}{4}$  cents per yard, was accepted.

August 18th, the proposal of the Eastern Coal Company to furnish and deliver at the Ernest street pumping station 1,100 tons of Georges Creek, New River or Pocahontas coal, at \$4.60 per ton of 2,000 pounds, and their proposal to furnish such quantity of Cumberland, lump and run of mine coal as may be needed to June 1, 1904, at \$4.50 and \$4.00 per ton of 2,000 pounds respectively, at their yard, was accepted.

The proposal of the Weaver Coal and Coke Company to furnish and deliver at the sewage precipitation tanks the anthracite coal needed to June 1, 1904, at \$5.65 per ton of 2,000 pounds, was accepted.

The proposal of John R. White & Son, Incorporated, to

1903.]

CITY DOCUMENT.

[No. 20.]

EIGHTY-THIRD  
QUARTERLY REPORT  
OF THE  
Department of Public Works  
OF THE  
CITY OF PROVIDENCE, R. I.

QUARTER ENDING SEPTEMBER 30, 1903.



The Providence Press:  
SNOW & FARNHAM, CITY PRINTERS,  
63 Washington Street.  
1903.

During the quarter, the construction of the following sewers was completed, namely :

No. of resolution.	Date of approval.	Date of completion.
132.	April 7, 1903, <i>Branch avenue, from Veazie street to the river — storm sewer,</i>	July 1, 1903.
131.	" " " <i>Branch avenue, from near Langdon street to near the Moshassuck river,</i>	Sept. 30, 1903.
133.	" " " <i>Charles street, from near Amboy to Branch avenue,</i>	July 2, 1903.
134.	" " " <i>Silver Spring street and Northup avenue.</i>	Aug. 22, 1903.

Work upon the following sewers was in progress at the close of the quarter, namely :

No. of resolution.	Date of approval.	
350.	Nov. 6, 1902, <i>Branch avenue, from Douglas to Veazie street.</i>	
127.	April 7, 1903, <i>Atwells avenue, Pine and Broad streets.</i>	
128.	" " " <i>Merino avenue, from Manton to near the Merino bridge.</i>	
129.	" " " <i>Weymouth street and Lloyd avenue.</i>	
130.	" " " <i>Wayland, Cole and University avenues.</i>	
136.	" " " <i>Section 30, Seekonk Division, Improved Sewerage System.</i>	
228.	June 5, " <i>North Main street, east side, from Stenton avenue to Third street.</i>	

Work upon the following sewers, completing the work ordered by the city council, had not commenced September 30, 1903, namely :



# REPORT.

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OFFICE OF THE DEPARTMENT OF PUBLIC WORKS, }  
CITY HALL, PROVIDENCE, R. I., October 1, 1903. }

TO THE HONORABLE THE CITY COUNCIL:

In compliance with the requirements of Chapter 41 of the ordinances, the Commissioner of Public Works respectfully presents the eighty-third quarterly report of the expenditures by the several departments under his direction and control, with statements of work ordered and the condition and cost of same, for the quarter ending September 30, 1903.

## WATER WORKS.

August 18th, the proposal of the Eastern Coal Company to furnish and deliver at Pettaconset pumping station 3,000 tons of Georges Creek Cumberland coal at \$4.60 per ton, was accepted.

August 18th, the proposal of John R. White & Son, Incorporated, to furnish and deliver at their yard the anthracite coal needed to June 1, 1904, at \$5.40 per ton, was accepted.

September 2nd, the proposal of the Providence Coal Company to furnish and deliver at Hope pumping station, 500 tons of anthracite coal of No. 2 buckwheat size at \$2.40 per ton, was accepted.

September 25th, the proposal of the Coffin Valve Company to furnish and deliver 50 six-inch water gates, Providence pattern, at \$17.75 each, and 20 eight-inch gates, same pattern, at \$26.50 each, was accepted.

The average daily consumption of water during the last quarter was 13,400,379 gallons.

Amount brought forward.....	\$18,892 75
Sewer in North Main street, east side, from Stenton avenue to Third street.....	35 00
Sewer in Silver Spring street and Northup avenue.....	4,435 34
Sewer in Tuxedo and Regent avenues.....	5 00
Sewer in Wallace street, from Webster avenue to Priscilla.....	3 75
Sewer in Wayland, Cole, and University avenues.....	1,091 03
Sewer in Weymouth street and Lloyd avenue.....	260 03
Sewer in Branch avenue, from Veazie street to the river near Vandewater street.....	766 66
Sewer in Moshassuck Division, Section 27.....	1,355 75
Sewer in Moshassuck Division, Section 28.....	1,449 41
Sewer in Seekonk Division, Section 30.....	8,594 47
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	\$36,919 19

For maintenance, . . . . . \$31,991 1■

Classified as follows:

Cleaning basins and sewers.....	\$6,126 75
Repairing basins and sewers.....	4,739 11
Cleaning and repairing old drains.....	1,960 23
Tools.....	843 88
Barn expenses.....	806 85
Inspection of connections.....	731 11
Sundries.....	701 22
Salary, superintendent.....	461 43
Horses, wagons, harnesses, etc.....	277 60
Cleaning private connections.....	38 00
Telephone lines.....	35 93
Office expenses.....	16 73
Repairs on gate-house.....	9 40
Filling cisterns, etc.....	8 35
Repairs on buildings.....	4 45

ERNEST STREET STATION.

Coal and wood.....	1,268 71
Engineers.....	874 54
Cleaning screens.....	641 93
Firemen.....	445 08
Cleaning and repairing pumps.....	363 28
Repairs on boilers.....	181 96
Care of grounds.....	132 43
Supplies.....	55 90
Lights.....	21 82
Care of buildings.....	20 27
Repairs on engines.....	9 66
Repairs on buildings, sewer maintenance yard....	28

Amount carried forward..... \$20,776 90

July 15th, a schedule of unpaid curbing bills was certified to the assessors of taxes for collection, amounting to \$10,153.95.

August 18th, the proposal of the Connecticut Trap Rock Quarries to furnish and deliver 1,000 tons of crushed stone at \$1.15 per ton, was accepted, and the order was increased September 22d 1,000 tons additional.

August 18th, the proposal of the Eastern Coal Company to furnish at their yard the Cumberland coal required to June 1, 1904, at \$4.00 and \$4.50 per net ton for run of mine and lump respectively, was accepted.

August 18th, the proposal of John R. White & Son, Incorporated, to furnish at their yard the anthracite coal required to June 1, 1904, at \$5.40 per net ton, was accepted.

September 17th, a contract was awarded to Edward W. Everson, and subsequently executed, for laying an asphalt pavement on Branch avenue, from Veazie street to the bridge near Vandewater street, the estimated amount of which is \$10,485.55.

During the quarter, the following work was completed :

SIDEWALKS TO BE CURBED AND GUTTERS PAVED.

Date of order.

June 18, 1903, *Wallace street, from Webster avenue to Priscilla.*  
“ “ “ *Calais street, from Jewett to West Park.*  
“ “ “ *Silver Spring street, from Ashton to Northup avenue.*

The following work was in progress September 30, 1903, namely :

The amount of bills approved on account of sewers for the fiscal year ending September 30, 1903, inclusive, was as follows:

**FOR CONSTRUCTION.**

Regular appropriation.....	\$85,878 68	
Improved sewerage appropriation.....	179,902 85	
		<u>\$265,781 53</u>

**Charged as follows:**

Material.....	\$45,649 79
Contract reservations.....	3,785 00
Additional catch-basins.....	1,725 20
Testing cement.....	1,189 98
Sundries.....	982 72
Patterns for special castings.....	83 63
Tools.....	21 70
Sundries, improved sewerage system.....	20 98
Sewer in Algonquin street and Reservoir avenue and in right of way.....	2,345 90
Sewer in Atwells avenue, Pine and Broad streets.....	129 84
Sewer in Barnes street, from low point in said street to Thayer.....	170 44
Sewer in Bellevue avenue, from near Elmwood to Bucklin street.....	9 00
Sewer in Branch avenue, from Douglas to Veazie street.....	6,772 44
Sewer in Branch avenue, from near Langdon street to near the Moshassuck river.....	2,795 14
Sewer in Cemetery street, from North Main to Frost.....	1,871 28
Sewer in Charles street, from near Amboy to Branch avenue.....	6,927 84
Sewer in Doane and Everett avenues.....	2,284 92
Sewer in Douglas and Camden avenues.....	5,492 93
Sewer in Hamlin street, from Elmwood avenue to Roger Williams park.....	9 00
Sewer in Jewett street, from Valley about 510 feet easterly.....	642 78
Sewer in Laurel Hill avenue, from Pocasset to Plainfield street.....	7 50
Sewer in Massachusetts avenue, from Virginia to Broad street.....	1,284 32
Sewer in Merino avenue, from Manton to near Merino bridge.....	42 00
Sewer in Moses Brown street, from Angell to South Angell.....	319 85
Sewer in North Main street, east side, from Sten- ton avenue to Third street.....	35 00
Amount carried forward.....	<u>\$84,569 27</u>

# REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 19

Amount brought forward.....	\$84,569 27
Sewer in Oriole and Rhode Island avenues.....	769 83
Sewer in Oxford street, from near Eddy to Allens avenue.....	813 40
Sewer in Phillips street, from near Hope to Morris avenue.....	1,784 32
Sewer in President avenue, from Arlington to Wayland.....	2,101 46
Sewer in Primrose, Walnut and Byron streets.....	1,450 27
Sewer in Sears avenue, from Atwells to Rangeley.	2,480 91
Sewer in Silver Spring street and Northup avenue	6,323 60
Sewer in Smithfield and Branch avenues.....	12 00
Sewer in Suffolk street, from Salina to Admiral...	3 25
Sewer in Summit avenue, from Fourth street to Seventh.....	1,474 12
Sewer in Tenth street, from North Main to High- land avenue.....	5 00
Sewer in Tuxedo and Regent avenues.....	1,364 58
Sewer in Wallace street, from near Webster avenue to Priscilla.....	538 12
Sewer in Wayland, Cole and University avenues..	1,091 03
Sewer in Weymouth street and Lloyd avenue.....	260 03
Sewer in Woodbine and Grandview streets.....	18 00
Sewer in Branch avenue, from Veazie street to the river near Vandewater street.....	11,951 60
Sewer in Moshassuck Division, Section 27.....	60,475 79
Sewer in Moshassuck Division, Section 28.....	58,315 08
Sewer in Seekonk Division, Section 29.....	16,147 47
Sewer in Seekonk Division, Section 30.....	13,832 40
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	\$265,781 53

For maintenance, . . . . . \$116,976 98

## Classified as follows:

Cleaning basins and sewers.....	\$20,416 85
Repairing basins and sewers.....	14,095 37
Cleaning and repairing old drains.....	10,276 40
Inspection of connections.....	2,710 66
Barn expenses.....	2,235 33
Tools.....	2,203 52
Sundries.....	1,933 99
Salary—superintendent.....	1,772 86
Horses, wagons, harnesses, etc.....	1,044 63
Use of water.....	900 00
Cleaning private connections.....	184 00
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Amount carried forward.....	\$57,773 61

Bills deposited with the city treasurer for collection from July 1 to September 30, 1903, inclusive, amounted to . . . \$6,464 06

As follows:

Labor and material.....	\$3,762 80
Blacksmith and harness work for other departments.....	1,062 50
Building driveways, etc.....	833 62
Boarding horses for other departments.....	283 62
Street sweepings.....	256 50
Use of steam rollers.....	148 07
Manure from barn.....	70 00
Discharging cargoes at city wharf.....	29 25
Removing trees.....	12 00
Empty oil barrels.....	5 60
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	\$6,464 06

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$4,685 07

As follows:

Labor and material.....	\$3,133 31
Blacksmith and harness work for other departments.....	549 10
Building driveways, etc.....	809 60
Boarding horses for other departments.....	283 62
Street sweepings.....	262 50
Manure from barn.....	70 00
Use of steam rollers.....	10 00
Discharging cargoes at city wharf.....	29 25
Removing trees.....	12 00
Empty oil barrels.....	5 60
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	\$4,685 07

Bills approved on account of highways for the fiscal year ending September 30, 1903, inclusive, amounted to:

Regular appropriation.....	\$301,725 72
Special appropriation.....	5,096 38
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	\$306,825 10

July 15th, a schedule of unpaid curbing bills was certified to the assessors of taxes for collection, amounting to \$10,153.95.

August 18th, the proposal of the Connecticut Trap Rock Quarries to furnish and deliver 1,000 tons of crushed stone at \$1.15 per ton, was accepted, and the order was increased September 22d 1,000 tons additional.

August 18th, the proposal of the Eastern Coal Company to furnish at their yard the Cumberland coal required to June 1, 1904, at \$4.00 and \$4.50 per net ton for run of mine and lump respectively, was accepted.

August 18th, the proposal of John R. White & Son, Incorporated, to furnish at their yard the anthracite coal required to June 1, 1904, at \$5.40 per net ton, was accepted.

September 17th, a contract was awarded to Edward W. Everson, and subsequently executed, for laying an asphalt pavement on Branch avenue, from Veazie street to the bridge near Vandewater street, the estimated amount of which is \$10,485.55.

During the quarter, the following work was completed :

**SIDEWALKS TO BE CURBED AND GUTTERS PAVED.**

**Date of order.**

June 18, 1903, *Wallace street, from Webster avenue to Priscilla.*

“ “ “ *Calais street, from Jewett to West Park.*

“ “ “ *Silver Spring street, from Ashton to Northup avenue.*

The following work was in progress September 30, 1903, namely :

Amount brought forward.....	\$18,249 57	
<i>Oriole avenue, from end of curb to Rhode Island avenue, and in Rhode Island avenue from Oriole to Angell street.....</i>	3,018 73	
<i>Oxford street, from Devine westerly about 50 feet to the present curbing.....</i>	319 10	
<i>Phillips street, from Hope to Morris avenue.....</i>	1,458 41	
<i>President avenue, northerly side, from Wayland westerly about 180 feet.....</i>	778 93	
<i>Primrose street, from Vinton to Vernon.....</i>	1,024 58	
<i>Promenade street, north side, from Leland to Calverly.....</i>	2,726 00	
<i>Regent avenue, from Harold street to River avenue</i>	78 53	
<i>Sears avenue, from Atwells to its northerly termination.....</i>	1,492 37	
<i>Silver Spring street, from Ashton to Northup avenue</i>	2,562 35	
<i>Suffolk street, from Admiral to Salina.....</i>	893 73	
<i>Tenth street, from North Main to Highland avenue</i>	942 48	
<i>Tuxedo avenue, from Amherst street to Atwells avenue.....</i>	1,280 93	
<i>Wallace street, from Webster avenue to Priscilla...</i>	1,370 85	
<i>Woodbine street, from North Main to Camp.....</i>	2,660 24	
		\$38,856 1

## PAVE WITH GRANITE BLOCKS.

<i>Promenade street, from Park to Leland.....</i>	1,011 5
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## PAVE WITH GRANITE BLOCKS, ASPHALT, OR BITUMINOUS MACADAM.

<i>Branch avenue, from Veazie street to bridge near Vandewater street.....</i>	9 0
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## GRADE.

<i>Manton avenue, from Unit street to Chalkstone avenue.....</i>	8,267 0
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## TO GRADE AND PUT IN GOOD CONDITION.

<i>Hastings and Ledge streets.....</i>	8,902 1
	\$306,825 1

## SIDEWALKS AND CURBING.

Bills approved on account of sidewalks and curbing from July 1 to September 30,

1903, inclusive, amounted to . . . \$8,215 6



Charged as follows :

Granite curbing.....	\$4,706 00
Concreting sidewalks.....	2,885 01
Repairing sidewalks and gutters.....	624 60
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	\$8,215 61

Curbing bills deposited with the city treasurer for collection from July 1 to September 30, 1903, inclusive, amounted to \$215 84

As follows :

Granite curbing.....	\$151 76
Concreting sidewalks.....	64 08
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	\$215 84

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$158 49

As follows :

Curbing bills.....	\$101 46
Granite curbing.....	32 11
Concreting sidewalks.....	24 92
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	\$158 49

Bills approved on account of sidewalks and curbing for the fiscal year ending September 30, 1903, inclusive amounted to \$19,476 55

Charged as follows :

Granite curbing.....	\$10,429 03
Concreting sidewalks.....	6,069 27
Repairing sidewalks and gutters .....	2,978 25
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	\$19,476 55

Amount brought forward.....	\$18,249 57
<i>Oriole avenue</i> , from end of curb to Rhode Island avenue, and in Rhode Island avenue from Oriole to Angell street.....	3,018 73
<i>Oxford street</i> , from Devine westerly about 50 feet to the present curbing.....	319 10
<i>Phillips street</i> , from Hope to Morris avenue.....	1,458 41
<i>President avenue</i> , northerly side, from Wayland westerly about 180 feet.....	778 93
<i>Primrose street</i> , from Vinton to Vernon.....	1,024 58
<i>Promenade street</i> , north side, from Leland to Calverly.....	2,726 00
<i>Regent avenue</i> , from Harold street to River avenue	78 53
<i>Sears avenue</i> , from Atwells to its northerly termination.....	1,492 37
<i>Silver Spring street</i> , from Ashton to Northup avenue	2,562 35
<i>Suffolk street</i> , from Admiral to Salina.....	893 73
<i>Tenth street</i> , from North Main to Highland avenue	942 48
<i>Tuxedo avenue</i> , from Amherst street to Atwells avenue.....	1,280 93
<i>Wallace street</i> , from Webster avenue to Priscilla...	1,370 85
<i>Woodbine street</i> , from North Main to Camp.....	2,600 24
	<hr/> \$38,856 80
PAVE WITH GRANITE BLOCKS.	
<i>Promenade street</i> , from Park to Leland.....	1,011 55
PAVE WITH GRANITE BLOCKS, ASPHALT, OR BITUMINOUS MACADAM.	
<i>Branch avenue</i> , from Veazie street to bridge near Vandewater street.....	9 00
GRADE.	
<i>Manton avenue</i> , from Unit street to Chalkstone avenue.....	8,267 01
TO GRADE AND PUT IN GOOD CONDITION.	
<i>Hustings and Ledge streets</i> .....	8,902 17
	<hr/> \$306,425 10

## SIDEWALKS AND CURBING.

Bills approved on account of sidewalks  
and curbing from July 1 to September 30.

1903, inclusive, amounted to . . . \$8,215 61

Charged as follows :

Granite curbing.....	\$4,706 00
Concreting sidewalks.....	2,885 01
Repairing sidewalks and gutters.....	624 60
	<hr/>
	\$8,215 61

Curbing bills deposited with the city treasurer for collection from July 1 to September 30, 1903, inclusive, amounted to \$215 84

As follows :

Granite curbing.....	\$151 76
Concreting sidewalks.....	64 08
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	\$215 84

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$158 49

As follows :

Curbing bills.....	\$101 46
Granite curbing.....	32 11
Concreting sidewalks.....	24 92
	<hr/>
	\$158 49

Bills approved on account of sidewalks and curbing for the fiscal year ending September 30, 1903, inclusive amounted to \$19,476 55

Charged as follows :

Granite curbing.....	\$10,429 03
Concreting sidewalks.....	6,069 27
Repairing sidewalks and gutters .....	2,978 25
	<hr/>
	\$19,476 55

Amount brought forward.....	\$18,249 57
<i>Oriole avenue</i> , from end of curb to Rhode Island avenue, and in Rhode Island avenue from Oriole to Angell street.....	3,018 73
<i>Oxford street</i> , from Devine westerly about 50 feet to the present curbing.....	319 10
<i>Phillips street</i> , from Hope to Morris avenue.....	1,458 41
<i>President avenue</i> , northerly side, from Wayland westerly about 180 feet.....	778 93
<i>Primrose street</i> , from Vinton to Vernon.....	1,024 58
<i>Promenade street</i> , north side, from Leland to Calverly.....	2,726 00
<i>Regent avenue</i> , from Harold street to River avenue	78 53
<i>Sears avenue</i> , from Atwells to its northerly termination.....	1,492 37
<i>Silver Spring street</i> , from Ashton to Northup avenue	2,562 35
<i>Suffolk street</i> , from Admiral to Salina.....	893 73
<i>Tenth street</i> , from North Main to Highland avenue	942 48
<i>Tuxedo avenue</i> , from Amherst street to Atwells avenue.....	1,280 93
<i>Wallace street</i> , from Webster avenue to Priscilla...	1,370 85
<i>Woodbine street</i> , from North Main to Camp.....	2,600 24
	<u>\$38,836 80</u>

## PAVE WITH GRANITE BLOCKS.

<i>Promenade street</i> , from Park to Leland.....	1,011 55
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## PAVE WITH GRANITE BLOCKS, ASPHALT, OR BITUMINOUS MACADAM.

<i>Branch avenue</i> , from Veazie street to bridge near Vandewater street.....	4 00
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## GRADE.

<i>Manton avenue</i> , from Unit street to Chalkstone avenue.....	8,267 01
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## TO GRADE AND PAVING AND CURBING.

<i>Hastings and Ledge streets</i> .....	8,902 17
	<u>\$306,425 10</u>

## SIDEWALKS.

## CURBING.

Bills approved on account and curbing from July 1 to 31 1903, inclusive, amounted to.....	\$8,215 61
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# REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 27

## Charged as follows :

Granite curbing.....	\$4,706 60
Concreting sidewalks.....	2,885 01
Repairing sidewalks and gutters.....	624 60
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	\$8,215 61

Curbing bills deposited with the city treasurer for collection from July 1 to September 30, 1903, inclusive, amounted to \$215 84

## As follows:

Granite curbing.....	\$151 76
Concreting sidewalks.....	64 08
	<hr/>
	\$215 84

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$158 49

## As follows:

Curbing bills.....	\$101 46
Granite curbing.....	32 11
Concreting sidewalks.....	24 92
	<hr/>
	\$158 49

Bills approved on account of sidewalks and curbing for the fiscal year ending September 30, 1903, inclusive amounted to \$19,476 55

## Charged as follows:

Granite curbing.....	\$10,429 03
Concreting sidewalks.....	6,069 27
Repairing sidewalks and gutters.....	2,978 25
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	\$19,476 55

## CITY ENGINEER.

Bills approved on account of the city engineer's department from July 1 to September 30, 1903, inclusive, amounted to . \$12,903 06

Charged as follows :

Salary — city engineer.....	\$1,125 00
Salaries of assistants.....	9,993 77
Salaries of clerks.....	824 47
Supplies — drawing material, etc.....	413 99
Instruments and repairs.....	335 50
Car fares.....	202 90
Carriage hire.....	4 00
Telephone lines.....	2 68
Sundries.....	50
Meteorological instruments and repairs.....	25
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	\$12,903 06

Bills approved on account of city engineer's department for the fiscal year ending September 30, 1903, inclusive, amounted to \$47,577 31

Charged as follows :

Salary — city engineer.....	\$4,500 00
Salaries of assistants.....	37,255 77
Salaries of clerks.....	3,167 69
Car fares.....	1,012 60
Supplies — drawing materials, etc.....	999 15
Instruments and repairs.....	549 65
Meteorological instruments and repairs.....	73 90
Telephone lines.....	10 72
Carriage hire.....	4 00
Sundries.....	3 83
	<hr/>
	\$47,577 31

## BRIDGES.

August 18th, the proposal of John R. White & Son, Incorporated, to furnish and deliver the egg anthracite coal required to June 1, 1904, at \$5.85 per ton of 2,000 pounds, was accepted.

August 18th, the proposal of the Eastern Coal Company to furnish and deliver as required to June 1, 1904, Georges Creek, New River or Pocahontas lump coal at \$5.00 per ton of 2,000 pounds, was accepted.

The following work was in progress at the end of the quarter, namely:

## TO BUILD BRIDGE AND APPROACHES.

No. of resolution. Date of approval.

220. June 20, 1902, *Over Woonasquatucket river at Egan and Chatlett streets.*
411. Dec. 19, " *Exchange bridge on its northerly side; bridge over the river between Exchange and Burnside bridges; River walls between Burnside and Exchange bridges.*

Bills approved on account of bridges from  
July 1 to September 30, 1903, inclusive,  
amounted to . . . . . \$8,803 34

Charged as follows:

Adelaide avenue, bridge abutments—to build....	\$3,677 22
Barn expenses.....	201 95
Branch avenue bridge.....	3 90
Branch avenue culvert.....	6 11
Burnside bridge.....	5 24
Car fares.....	25 00
Cemetery street bridge.....	1 10
Amount carried forward.....	\$3,920 52

## CITY ENGINEER.

Bills approved on account of the city engineer's department from July 1 to September 30, 1903, inclusive, amounted to . \$12,903 06

## Charged as follows :

Salary — city engineer.....	\$1,125 00
Salaries of assistants.....	9,993 77
Salaries of clerks.....	824 47
Supplies — drawing material, etc.....	413 99
Instruments and repairs.....	335 50
Car fares.....	202 90
Carriage hire.....	4 00
Telephone lines.....	2 68
Sundries.....	50
Meteorological instruments and repairs.....	25
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## Charged as follows :

Salary — city engineer.....	\$4,500 00
Salaries of assistants.....	37,255 77
Salaries of clerks.....	3,167 69
Car fares.....	1,012 60
Supplies — drawing materials, etc.....	999 15
Instruments and repairs.....	549 65
Meteorological instruments and repairs.....	73 90
Telephone lines.....	10 72
Carriage hire.....	4 00
Sundries.....	3 83
	<hr/>
	\$47,577 31



## BRIDGES.

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No. of resolution. Date of approval.

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411. Dec. 19, " *Exchange bridge on its northerly side ; bridge over the river between Exchange and Burnside bridges ; River walls between Burnside and Exchange bridges.*

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amounted to . . . . . \$8,803 34

## Charged as follows:

Adelaide avenue, bridge abutments—to build....	\$3,677 22
Barn expenses.....	201 95
Branch avenue bridge.....	3 90
Branch avenue culvert.....	6 11
Burnside bridge.....	5 24
Car fares.....	25 00
Cemetery street bridge.....	1 10
Amount carried forward.....	\$3,920 52

Amount brought forward.....	\$3,920 52
Charles street railroad bridge.....	51 40
Eagle street bridge.....	5 75
Exchange bridge.....	7 90
Francis street bridge.....	99 22
Geneva bridge..... <sup>9</sup>	4 60
Horses, wagons, harnesses, etc.....	69 76
Lumber, hardware, etc.....	71 31
Manton avenue bridge.....	5 50
Mill street bridge.....	27 37
Nash lane bridge.....	1 95
Park street bridge.....	13 29
Point street bridge.....	613 72
Promenade street bridge.....	3 16
Randall street bridge.....	27 68
Red bridge.....	375 60
Rent of keeper's house — Washington bridge.....	36 00
Salaries — Point street bridge.....	1,054 25
Salaries — Red bridge.....	634 32
Salaries — Washington bridge.....	612 82
Smithfield avenue bridge.....	61 75
Sundries.....	189 59
Telephone lines.....	2 68
Tools.....	37 85
Veazie street bridge.....	2 30
Wanskuck bridge.....	19 11
Washington bridge.....	822 88
Washington row bridge.....	11 86
West River street bridge.....	2 20
Weybosset bridge.....	17 00
	<hr/>
	\$8,803 34

Bills approved on account of bridges for  
the fiscal year ending September 30, 1903,  
inclusive, amounted to . . . . . \$27,942 0

Charged as follows:

Adelaide avenue, bridge abutments — to build.....	\$5,988 84
Atwells avenue bridge.....	28 20
Barn expenses.....	558 41
Branch avenue bridge.....	195 87
Branch avenue culvert.....	6 11
Building at city yard.....	10 99
Burnside bridge.....	27 66
Car fares.....	75 00
	<hr/>
Amount carried forward.....	\$6,901 08

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amounted to . . . . . \$8,803 34

Charged as follows :

Adelaide avenue, bridge abutments—to build....	\$3,677 22
Barn expenses.....	201 95
Branch avenue bridge.....	3 90
Branch avenue culvert.....	6 11
Burnside bridge.....	5 24
Car fares.....	25 00
Cemetery street bridge.....	1 10
Amount carried forward.....	\$3,920 52

Bills approved for account of building the Merino bridge for the fiscal year ending September 30, 1903, inclusive, amounted to **\$54,435 72**

Bills approved for account of building the river walls between the Burnside and Exchange bridges, from July 1 to September 30, 1903, inclusive, have been paid from the special appropriation for that work, to the amount of . . . . . **\$1,954 61**

Bills approved for account of building the river walls between the Burnside and Exchange bridges, for the fiscal year ending September 30, 1903, inclusive, amounted to **\$5,488 14**

### PUBLIC LIGHTS.

Bills approved on account of the public lights from July 1 to September 30, 1903, inclusive, amounted to . . . . . **\$69,939 52**

#### Charged as follows:

Arc lights.....	\$51,632 75
Incandescent lights.....	11,770 53
Welsbach lights.....	6,028 43
Salaries.....	294 74
Barn expenses.....	100 12
Gas for street lights.....	56 28
Setting and removing gas posts.....	50 49
Horses, wagons, harnesses, etc.....	6 18
	<hr/>
	<b>\$69,939 52</b>

Bills deposited with the city treasurer for collection from July 1 to September 30, 1903, inclusive, amounted to . . . . . **\$5 00**

As follows :

Removing gas posts.....	\$3 00
One common lantern.....	2 00
	<hr/>
	\$5 00

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$5 00

As follows :

Removing gas posts.....	\$3 00
One common lantern.....	2 00
	<hr/>
	\$5 00

Bills approved on account of the public lights for the fiscal year ending September 30, 1903, inclusive, amounted to \$288,214 58

Charged as follows :

Arc lights.....	\$216,603 50
Incandescent lights.....	46,134 04
Welsbach lights.....	23,823 07
Salaries .....	973 31
Gas for street lights.....	245 49
Barn expenses .....	208 70
Setting and removing gas posts.....	208 08
Horses, wagons, harnesses, etc.....	18 09
Office furniture and supplies.....	30
	<hr/>
	\$288,214 58

## PUBLIC WORKS OFFICE.

Bills approved on account of the public works office from July 1 to September 30, 1903, inclusive, amounted to \$5,118 40

## Charged as follows:

Salaries of commissioner and secretary.....	\$1,760 16
Salaries of office assistants.....	3,202 13
Office supplies.....	153 43
Telephone lines.....	2 68
	<hr/>
	\$5,118 40

Bills approved on account of the public works office for the fiscal year ending September 30, 1903, inclusive, amounted to . . . \$22,674 75

## Charged as follows:

Salaries of commissioner and secretary.....	\$7,580 16
Salaries of office assistants.....	12,487 26
Installation of card system.....	2,000 00
Office supplies.....	596 61
Telephone lines.....	10 72
	<hr/>
	\$22,674 75

## CONTINGENCIES.

Bills approved for the inspection of electric wires for the fiscal year ending September 30, 1903, inclusive, have been paid from the appropriation for contingencies to the amount of . . . . . \$90 50

WALTER F. SLADE,  
*Commissioner.*

## REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 33

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As follows :

Removing gas posts.....	\$3 00
One common lantern.....	2 00
	\$5 00

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$5 00

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WALTER F. SLADE,  
*Commissioner.*



1904.]

CITY DOCUMENT.

[No. 4.]

EIGHTY-FOURTH

QUARTERLY REPORT

OF THE

Department of Public Works

OF THE

CITY OF PROVIDENCE, R. I.

QUARTER ENDING DECEMBER 31, 1903.



The Providence Press  
SNOW & FARNHAM, CITY PRINTERS,  
63 Washington Street.  
1904.



1904.]

CITY DOCUMENT.

[No. 4.

808745

EIGHTY-FOURTH  
QUARTERLY REPORT  
OF THE  
Department of Public Works  
OF THE  
CITY OF PROVIDENCE, R. I.

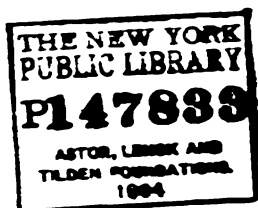
QUARTER ENDING DECEMBER 31, 1903.



The Providence Press  
SNOW & FARNHAM, CITY PRINTERS,  
63 Washington Street.  
1904.

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# REPORT.

OFFICE OF THE DEPARTMENT OF PUBLIC WORKS, }  
CITY HALL, PROVIDENCE, R. I., January 1, 1904. }

TO THE HONORABLE THE CITY COUNCIL:

In compliance with the requirements of Chapter 41 of the ordinances, the Commissioner of Public Works respectfully presents the eighty-fourth quarterly report of the expenditures by the several departments under his direction and control, with statements of work ordered and the condition and cost of same, for the quarter ending December 31, 1903.

## WATER WORKS.

December 11th, the proposal of the Phillips Lead and Supply Company to furnish 9,000 pounds of  $\frac{5}{8}$ -inch lead pipe at \$4.90 per hundred pounds delivered in the city yard, was accepted.

December 11th, the proposal of The L. H. Tillinghast Supply Company to furnish and deliver in the city yard 9,000 pounds of  $\frac{5}{8}$ -inch lead pipe at \$4.90 per hundred pounds, was accepted.

December 11th, the proposal of The Congdon & Carpenter Company to furnish and deliver in the city yard 8,000 pounds of pig lead at \$4.42 $\frac{1}{2}$  per hundred pounds; and one pig of tin at twenty-seven and 50-100 dollars (\$27.50) per hundred pounds, was accepted.

December 11th, the proposal of the Miller Iron Company to furnish and deliver in the city yard 8,000 pounds of pig lead at \$4.42 $\frac{1}{2}$  per hundred pounds, was accepted.

December 11th, the proposal of John W. Lyon to furnish taps, stops and plugs of various sizes was accepted, and a contract subsequently executed. Amount, \$1,239.55.

December 14th, the proposal of the Coffin Valve Company to furnish fire hydrants and water gates was accepted, and a contract subsequently executed. Amount, \$4,590.50.

December 15th, the proposal of the Fuller Iron Works to furnish special castings for the water and sewer departments for the year 1904 was accepted, and a contract entered into.

The average daily consumption of water during the last quarter was 13,488,330 gallons, and the average daily consumption for the year 1903 was 13,114,614 gallons.

Water pipes were laid during the quarter as follows :

12-INCH.	
In Merino avenue.....	712.47 feet.
8-INCH.	
In Houghton street; and in Reservoir avenue in the town of Cranston.....	677.07 feet.
6-INCH.	
In Caswell and Dayton courts and Roger Williams park: Augusta, Bowlet, David, Dunford, Eames, Edith, Elgin, Herschel, Moorefield, Oppen, O'Connell, Stansbury, Tell and Weymouth streets: Alumni, University and Wayland avenues: in Henry, Noble and Narragansett streets: Edgewood, Germania, Pontiac and Westwood avenues in the town of Cranston; and in Vermont street in the town of Johnston.....	7,761.85 feet.
Total.....	9,151.39 feet.
or 1.733 + miles.	

Water pipes were removed during the quarter as follows :

From Merino avenue.....	711.77 feet.
or .134+ mile.	

Statement of sizes and lengths of pipe laid since the commencement of the work :

---

36-inch .....	10,084.00 feet.
30-inch .....	61,328.30 feet.
24-inch .....	43,758.29 feet.
20-inch .....	9,626.59 feet.
16-inch .....	33,812.95 feet.
12-inch .....	104,991.24 feet.
10-inch .....	15,057.14 feet.
8-inch .....	290,709.91 feet.
6-inch .....	1,231,296.47 feet.
<b>Total .....</b>	<b>1,800,664.89 feet.</b>

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or, 341.035 + miles.

Statement of sizes and lengths of pipe laid for the special water service for fire protection since the commencement of the work :

24-inch .....	4,188.58 feet.
16-inch .....	23,004.37 feet.
12-inch .....	2,215.76 feet.
<b>Total .....</b>	<b>29,408.71 feet</b>

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or, 5.569 + miles.

Eleven fire hydrants have been set during the quarter, one in each of the following locations :

**A**ugusta street, north side, 2 feet east of Wainwright street.  
**B**ath street, east side, 6.7 feet south of West Park street.  
**J**ewett street, north side, 330.5 feet west of Bath street.  
**O**pper street, east side, 3.5 feet north of Branch avenue.  
**P**ontiac avenue, Cranston, east side, 23.5 feet south of Park avenue.  
**R**osedale street, north side, 344 feet east of Ellery street.  
**T**ucker avenue, Cranston, south side, 608 feet west of Broad street.  
**U**niversity avenue, north side, 209 feet west of Slater avenue.  
**U**niversity avenue, north side, 194 feet east of Elmgrove avenue.  
**W**eymouth street, east side, 22.5 feet north of Lloyd avenue.  
**W**eymouth street, east side, 214 feet south of Alumni avenue.

The total number of fire hydrants, exclusive of those for special service for fire protection, is now nineteen hundred and eighty-nine—eighteen hundred and eighty-six flush, and one hundred and three post.

The total number of fire hydrants on the special water service for fire protection is ninety-two.

During the quarter, two hundred and forty-eight water meters were set, of which number sixty-four were to replace other meters. The use of sixteen meters was discontinued.

The following meters were in use at the close of the quarter :

KIND.	SIZE.									Total.
	$\frac{1}{2}$ -in.	$\frac{3}{4}$ -in.	1-in.	1 $\frac{1}{4}$ -in.	2-in.	3-in.	4-in.	6-in.	8-in.	
Ball & Fitts.....	2,157	440	103	11	5					2,716
Ball & Fitts, rotary...			4	7		2	1			14
Crown.....	9,359	1,085	321	139	37	24	25	1		10,891
Empire.....	932	134	61	45	13	1	1			1,187
Fales, Jenks & Sons..			1							1
Gem.....					13	28	16	3		60
Thomson.....	4,173	424	75	53	22	7	7	2		4,763
Trident.....	102		1							103
Venturi.....									1	1
Worthington.....	1				1					2
	16,724	2,083	566	255	91	62	50	6	1	19,831

One plumber's license was issued during the quarter, making the total number one hundred and thirty-two, all of which expire December 31, 1903.

Six hundred and eighty-six permits to do plumbing work were issued during the quarter.

One hundred and fifty applications for water were made during the quarter, making the total number December 31, 1903, twenty-six thousand eighty-four.

The number of new service stops opened during the quarter was one hundred and forty-nine.



The total number of service stops opened to December 31, 1903, inclusive, was twenty-five thousand four hundred and twenty-two. The number in actual use December 31, 1903, was twenty-three thousand three hundred and thirty-two.

The following is a list of drinking troughs supplied with water by the Providence water works, viz. :

Academy avenue, north of Chalkstone.  
 Angell street, junction of South Angell.  
 Atwells avenue, junction of Harris.  
 Bassett street, off Hospital.  
 Branch avenue and Abbott street.  
 Broad street, junction of Eddy.  
 Broadway, junction of Westminster street.  
 Canal street, near Linard.  
 Charles street, corner of Ormsbee avenue.  
 Charles street and Branch avenue.  
 Chalkstone avenue, junction of Manton.  
 Dexter street, near Durfee.  
 Dorrance street, near Exchange place.  
 Douglas avenue and Chalkstone.  
 Douglas avenue and Admiral street.  
 Dyer street, near Crawford street bridge.  
 Dyer street, junction of Eddy.  
 Elmwood avenue and Public street.  
 Federal street, junction of Kenyon.  
 Fountain street, junction of Carpenter.  
 Hartford avenue, junction of Killingly street.  
 Manton avenue, junction of Atwells.  
 Miller avenue (Roger Williams park).  
 North Main street, junction of Benefit.  
 Olneyville square.  
 Plainfield street, junction of Pocasset avenue.  
 Prairie avenue, junction of Broad street.  
 Point street, junction of Friendship.  
 Point street, near the bridge.  
 Potters avenue, corner of Cranston street.  
 Randall square.  
 Reservoir avenue, junction of Pontiac street.  
 Rochambeau avenue, east of Blackstone boulevard.  
 Smith street, junction of Chalkstone avenue.  
 South Main street, junction of Wickenden.  
 Thayer street, junction of Hope.  
 Trinity square.  
 Waterman street, corner of East River.  
 Westminster street, junction of Cranston.  
 Weybosset street, near Mathewson.  
 Wickenden street, corner of Governor.

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**TOWN OF CRANSTON.**

Cranston street, junction of Phenix road.  
Park avenue, corner of Doric.

**TOWN OF JOHNSTON.**

Manton avenue, near Killey.

The following is a list of street sprinklers ready for use on the Providence water works, viz.:

Aborn street, near junction of Atwells avenue.  
America street, near Atwells avenue.  
Barton street, corner of Broadway.  
Bradford street, near Broadway.  
Branch avenue, near junction of North Main street.  
Benefit street, foot of Angell.  
Benefit street, between North Main and Halsey.  
Beacon avenue, near Friendship street.  
Broad street, near Gallup.  
Broadway, north side, west of Harris avenue.  
Camp street, between Cypress and Larch.  
Coddling street, near Westminster.  
Cranston street, east side of railroad bridge.  
Crary street, between Eddy and Hospital.  
Cromwell street, near Dexter.  
Daniel avenue, near Plainfield street.  
Dexter street, opposite Division.  
Doyle avenue, near Hope street.  
Doyle avenue, near North Main street.  
Exchange place, west end.  
Ford street, west of Cranston.  
Garnet street, near Pine.  
Governor street, near Waterman.  
Greenwich street, corner Elmwood avenue.  
Harris avenue, near Atwells.  
Hope street, junction of Thayer.  
Hope street, corner of Wickenden.  
John street, corner of Benefit.  
Knight street, corner of Grove.  
Laurel Hill avenue, near Plainfield street.  
Linden street, near Broad.  
Manning street, near Brook.  
Medway street, east of Wayland avenue.  
Melrose street, near south corner of burying ground.  
Moore street, corner of Broad.  
North Main street, corner of Thomas.  
North Main street, near Mill.  
Olive street, east of Prospect.  
Olney street, near Camp.  
Orms street, near Ormsbee avenue.

**Oxford street**, corner of Eddy.  
**Pocasset avenue**, near Plainfield street.  
**Power street**, west of Hope.  
**Promenade street**, west of Gaspee.  
**Promenade street**, west of Holden.  
**Promenade street**, west of Steeple.  
**Prospect street**, corner of Bowen.  
**Public street**, about 200 feet east of Temple.  
**Reservoir avenue**, opposite Atlantic.  
**Roger Williams park**, near Broad street (private).  
**Salem street**, between Potters avenue and Benedict street.  
**Smith street**, near Oakland avenue.  
**Smith street**, near Schaffer.  
**Smithfield avenue**, north of Branch.  
**Smithfield avenue**, north of the Moshassuck river.  
**Transit street**, between South Water and South Main.  
**Traverse street**, corner of Pike.  
**Washington street**, corner of Dean.  
**Webster avenue**, north of Progress.  
**West Friendship street**, near Broad.  
**Weybosset street**, opposite Abbott Park place.  
**Willard avenue**, west of Prairie.  
**Willow street**, west of Messer.  
**Winter street**, near Pond.  
**Woodland street**, near Holden.

The following is a list of drinking fountains, namely :

**Atwells avenue**, corner of Academy.  
**Branch avenue**, at Charles street.  
**Benefit street**, corner of College.  
**Canal street**, corner of Steeple.  
**Landace street**, corner of Orms.  
**Cranston street**, junction of Westminster.  
**Davis park**.  
**Dexter street**, opposite Division.  
**Dorrance street**, near Exchange place.  
**Dyer street**, corner of Crawford.  
**Friendship street**, at Hayward park.  
**Jackson street**, corner of Westminster.  
**North Main street**, near Mill.  
**Olneyville square**.  
**Prairie avenue**, opposite Comstock.  
**Point street**, corner of Eddy.  
**Potters avenue**, corner of Elmwood.  
**Randall square**.  
**Roger Williams park**, near Betsey Williams cottage.  
**Roger Williams park**, near Elmwood avenue.  
**Roger Williams park**, near the menagerie.  
**Ship street**, corner of Dyer.  
**Tockwotton park**.

Westminster street, corner of Dyer.  
Wickenden street, corner of Transit.

#### SPRINKLER HYDRANTS FOR CAR SPRINKLERS.

Angell street, south side, 90 feet east of Wayland avenue, in sidewalk.  
Camp street, east side, 125 feet north of Olney, in sidewalk.  
Chalkstone avenue, northeast corner of Fallon, in sidewalk.  
Dexter street, west side, 18 feet south of Cranston, in sidewalk.  
Eddy street, west side, at Richmond, in street.  
Eddy street, west side, 5 feet south of north line of Washington avenue, street.  
Edna street, west side, 16 feet north of south line of car-house.  
Elmwood avenue, east side, 85 feet south of Thackeray street.  
Hope street, east side, 125 feet north of Barnes, in street.  
Manton avenue, west side, 150 feet south of fire station, in sidewalk.  
Market square, north side, 24 feet east of Canal street, in street.  
North Main street, west side, 182 feet north of White, in street.  
North Main street, west side, 17 feet north of Livingstone, in street.  
Orms street, south side, 23 feet east of Windsor, in sidewalk.  
Randall square, east side, 32 feet north of Randall street, in street.  
Richmond street, southwest side, 44 feet southeast of Pine, in sidewalk.  
Smith street, southwest side, 360 feet southeast of Hilltop avenue, sidewalk.  
Thurbers avenue, south side, 298 feet east of Broad street, in sidewalk.  
Wickenden street, south side, 167 feet west of Brook, in street.  
Winter street, east side, 187 feet south of Pond, in sidewalk.

The following table shows the lengths, sizes, etc., of services laid during twenty-seven years, ending December 31, 1903:

YEARS.	LENGTH OF SERVICES IN FEET.							TAPS USED.						STOPS USED.						Service Boxes Used.		
	SIZES OF PIPE.							Trench- ing.	Having.	TAPS USED.					STOPS USED.							
	$\frac{1}{2}$ inch.	$\frac{3}{4}$ inch.	1 inch.	1 $\frac{1}{4}$ inch.	1 $\frac{1}{2}$ inch.	Totals.	$\frac{1}{2}$ in.			$\frac{3}{4}$ in.	1 in.	1 $\frac{1}{4}$ in.	1 $\frac{1}{2}$ in.	To- tal.	$\frac{1}{2}$ in.	$\frac{3}{4}$ in.	1 in.	1 $\frac{1}{4}$ in.	1 $\frac{1}{2}$ in.		To- tal.	
To Dec. 31, 1902.....	9,919.9	231,485.08	21,854.99	4,897.4	3,587.2	457.7	271,773.17	285,865.79	34,911.28	612	13,910	1,656	420	329	16,937	645	14,818	1,371	303	288	17,425	17,924
1903.....		7,818.9	623.3	50.6	51.	.....	8,582.8	9,018	1,044.	.....	474	48	6	7	535	....	490	43	3	5	541	551
Totals...	9,919.9	239,334.88	22,448.29	4,957.	3,638.2	457.7	280,355.97	294,883.79	35,955.28	612	14,384	1,704	426	346	17,472	645	15,308	1,414	306	293	17,966	18,475

The following table shows the lengths, sizes, etc., of services laid during the year ending Dec. 31, 1903:

MONTHS.	LENGTH OF SERVICES IN FEET.					NUMBER AND SIZE OF TAPS USED.										NUMBER AND SIZE OF STOPS USED.					Service Boxes Used.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
	SIZE OF PIPE.					Totals.	Total Length of Trenching.	Total Length of Paving.	NUMBER AND SIZE OF TAPS USED.					NUMBER AND SIZE OF STOPS USED.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
	$\frac{1}{4}$ inch.	$\frac{3}{8}$ inch.	1 inch.	$1\frac{1}{2}$ inch.	$1\frac{3}{4}$ inch.				$\frac{1}{4}$ in.	$\frac{3}{8}$ in.	$\frac{1}{2}$ in.	1 in.	Total.	$\frac{1}{4}$ in.	$\frac{3}{8}$ in.	$\frac{1}{2}$ in.	1 in.	Total.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
January.....	122.8	.....	.....	.....	.....	122.8	131.	22.	10	.....	.....	.....	.....	.....	.....	10	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....



The following table exhibits the number of service stops opened each month from the commencement to December 31, 1903:

MONTH.	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903
January.....	54	33	21	34	55	15	49	9	50																								
February.....	47	18	7	25	23	18	9	10																									
March.....	38	34	63	7	45	32	60	19	46	23	39	11	28	9	54	16	14	19	28	24	28	36	40	27	20	42	46	28	30	34	39	35	
April.....	109	109	108	32	108	82	78	52	58	55	49	55	62	48	68	60	38	61	53	73	76	71	76	67	100	70	53	69	47	73	73	69	
May.....	224	246	117	162	168	136	95	80	84	66																							
June.....	379	295	151	172	148	114	103	71	109	82																							
July.....	333	261	127	141	158	83	80	49	25	56	77	66	76	77	83	62	80	74	67	85	105	33	80	80	83	29	51	66	44	81	74	69	
August.....	224	209	129	83	94	91	31	51	39	58	87	69	61	57	71	49	52	56	76	95	104	115	116	83	64	69	54	80	66	79	62	67	
September.....	184	117	139	101	94	80	63	44	37	60	67	91	59	70	59	74	63	64	77	93	114	88	112	70	71	67	63	53	76	72	66	72	
October.....	138	135	160	92	84	51	78	79	48	61	66	47	65	62	63	80	79	64	54	104	162	96	85	90	70	62	47	54	65	60	43	58	
November.....	100	104	185	86	54	73	52	63	54	37	64	49	51	39	67	69	47	58	72	81	118	80	70	68	52	54	42	45	54	63	55	48	
December.....	56	83	45	122	60	35	55	45	47	29	40	27	56	41	46	28	49	42	53	59	102	62	62	57	58	53	47	49	56	44	40	43	
Totals.....	56	1863	1596	1964	977	1008	865	77	473	618	548	614	612	611	576	595	612	676	642	684	708	747	698	666	698	697	698	697	698	697	698	697	612



The receipts for water each year since the commencement have been as follows :

Year.	Amount.	Year.	Amount.
1872.....	\$41,003 51	1888.....	\$346,731 58
1873.....	97,386 09	1889.....	377,497 97
1874.....	132,052 39	1890.....	401,140 86
1875.....	165,144 71	1891.....	404,553 84
1876.....	183,868 73	1892.....	409,421 21
1877.....	200,039 39	1893.....	427,546 51
1878.....	218,883 33	1894.....	432,383 97
1879.....	229,551 78	1895.....	471,069 97
1880.....	247,705 06	1896.....	485,187 33
1881.....	260,530 87	1897.....	490,652 47
1882.....	269,318 77	1898.....	502,803 10
1883.....	283,632 89	1899.....	522,124 46
1884.....	302,368 36	1900.....	554,949 62
1885.....	313,561 21	1901.....	578,869 07
1886.....	323,084 67	1902.....	605,307 35
1887.....	339,513 60	1903.....	621,016 74

The amount of bills approved on account of water works from October 1, to December 31, 1903, inclusive, was :

For maintenance, . . . . . \$44,510 23

Classified as follows :

PETTACONSET PUMPING STATION.

Coal and wood.....	\$7,691 82
Engineers.....	685 45
Sundries.....	652 10
Fireman.....	589 20
Superintendence.....	386 07
Barn expenses.....	304 92
Real estate at Pettaconset.....	150 00
Amount carried forward.....	\$10,459 56

Amount brought forward.....	\$10,459 56	
Oil, waste and packing.....	138 18	
Worthington high-duty engine.....	110 81	
Care of grounds.....	96 55	
Repairs on boilers.....	80 63	
Labor on fuel.....	80 50	
Cornish engine house.....	17 20	
Corliss pumping engine and house.....	10 00	
Lights.....	9 94	
		\$11,003 37

## SOCKANOSSET RESERVOIR.

Watchman.....	\$188 00	
Sundries.....	32 10	
		220 10

## HOPE PUMPING STATION.

Coal and wood.....	\$671 35	
Fireman.....	524 67	
Engineers.....	308 86	
Repairs on boilers.....	256 54	
Sundries.....	120 63	
Lights.....	96 54	
Oil, waste and packing.....	22 29	
		2,000 86

## HOPE RESERVOIR.

Watchman.....	\$211 50	
Sundries.....	76 31	
		287 81

## FRUIT HILL RESERVOIR.

Sundries.....	\$830 83	
Watchman.....	211 50	
		1,042 33

## METER DEPARTMENT.

Water meters.....	\$4,666 13	
Setting and repairing meters.....	1,391 04	
		6,057 17

## PIPE LINE AND SERVICE STOPS.

Repairs.....	\$4,610 07	
Superintendence — salaries.....	876 47	
		5,486 54

Amount carried forward ..... \$26,098 20

# REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 17

Amount brought forward..... \$26,098 20

## PIPE YARD.

Laying water pipe.....	\$2,683 40	
Stop valves.....	1,417 80	
Laying service pipe.....	1,283 69	
Service pipe.....	897 50	
Special castings.....	459 90	
Pig lead and tin.....	360 36	
Cast iron water pipe.....	213 23	
Labor on and carting pipe.....	132 53	
Tools.....	99 68	
Taps and stops.....	83 22	
Pipe yard, office expenses.....	82 35	
Fire hydrants, boxes and covers.....	47 67	
Repairs on pipe yard buildings.....	1 13	
		7,762 46

## MISCELLANEOUS.

Town of Cranston, tax.....	\$7,077 69	
Clerks' and inspectors' salaries.....	1,596 31	
Barn expenses.....	559 96	
Prevention of defilement of the Pawtuxet.....	549 99	
Town of North Providence, tax.....	400 00	
Horses, wagons, harnesses, etc.....	144 29	
Telephone lines.....	138 18	
Car fares.....	75 00	
Real estate at Pawtuxet.....	67 50	
Transferring water service records to card system.....	41 05	
Public drinking fountains and troughs.....	60	
		10,649 57
		\$44,510 23

For construction, . . . . . \$36,987 35

Charged as follows:

Installation of sand filtration plant at Pettaconset, \$36,987 35.

The total expenditures to December 31,  
1903, inclusive, was . . . . . \$9,597,075 18

The net expenditure for maintenance from October 1 to  
December 31, 1903, inclusive, was..... \$36,302 60

The net expenditure for maintenance to December 31, 1903,  
inclusive, was..... \$1,994,759 30

The net expenditure for construction from October 1 to De-  
cember 31, 1903, inclusive, was..... \$36,987 35

The value of the water works system,  
January 1, 1903, as estimated by the city  
engineer, was as follows:

Pettaconset pumping station.....	\$340,694 00
Hope pumping station .....	129,406 79
Sockanosset, Hope and Fruit Hill reservoirs.....	714,047 55
Main lines and distribution pipes.....	2,726,775 16
Real estate in Pawtuxet and Lincoln .....	15,975 00
Tools and supplies.....	29,875 18
	<hr/> \$3,956,772 68

Bills deposited with the city treasurer  
for collection from October 1 to December 31,  
1903, inclusive, amounted to . . . \$77,878 37

As follows:

Water.....	\$70,847 10
Water meters.....	3,480 23
Setting and repairing meters.....	1,797 87
Labor and material, laying services, etc., .....	1,522 36
Rent of real estate .....	101 75
Penalties.....	50 00
Repairs on pipe line .....	39 04
Permanently closing service stops.....	35 00
Use of lead furnace.....	5 00
	<hr/> \$77,878 37

During the quarter, coupons from bills  
collected have been returned by the city  
treasurer and receipted for to the amount of \$77,327 39

As follows:

Water.....	\$69,069 76
Water meters.....	3,477 00
Labor and material, laying services, etc.....	2,424 19
Setting and repairing meters.....	2,094 60
Rent of real estate.....	93 00
Repairs on pipe line.....	70 84
Penalties.....	50 00
Permanently closing service stops.....	40 00
Use of lead furnace.....	5 00
Repairs on buggy.....	3 00
	<hr/> \$77,327 39

## SEWERS.

One drain layer's license was issued during the quarter, making the total number one hundred and forty-six, all of which expire December 31, 1903.

During the quarter ending December 31, 1903, two hundred and seventy-two permits were issued to drain layers—one hundred and fifty-six for new work and one hundred and sixteen for extension and repairs of drains.

October 20th, contracts for the construction of the following sewers were awarded and subsequently executed, namely :

[The amounts given below are what are estimated will be paid the contractors for labor, and do not include the cost of inspection and materials.]

### TO FREDERICK E. SHAW.

No. of resolution. Date of approval.

322.	Sept. 18, 1903,	<i>Dudley street and the city yard,</i>	\$12,060 60
319.	" " "	<i>Elton street, from a point one hundred feet east of Taber avenue to Elmgrove</i>	420 80

### TO CHARLES CRANKSHAW.

318.	Sept. 18, 1903,	<i>Hilton street and California avenue,</i>	\$1,645 80
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 TO FRANK A GAMMINO.

No. of resolution. Date of approval.

320. Sept. 18, 1903, *Vandewater street, from*  
*Douglas avenue to*  
*Branch . . . .* \$4,393 10

November 10th, the proposals of the Charles S. Bush Company and Starkweather & Williams Company to furnish prime green copperas during the year 1904 at forty-four cents per hundred pounds, f. o. b. Harbor Junction wharf, were each accepted for one-half the quantity required.

December 17th, the proposal of Edwin D. Allen to furnish sewer pipe and flagstones was accepted and a contract subsequently executed. Amount, \$12,589.22.

December 17th, the proposal of the Smithfield Granite Company to furnish and deliver seventy-five catch-basin inlet stones at \$5.25 each, was accepted.

December 28th, the proposal of Charles M. Kelly to furnish and deliver along the line of the work the Portland cement required during 1904, was accepted and a contract subsequently executed.

December 28th, the proposal of the H. R. Horton Company to furnish and deliver along the line of the work the natural cement required during 1904, was accepted and a contract subsequently executed.

## SEWERS CONSTRUCTED TO DECEMBER 31, 1903, IN MILES.

ITEMS.	KIND.	Built previous to 1903.	Built during 1903.	Total to Dec. 31, 1903
Under regular appropriation.....	Brick.	37.151	1.161	38.312
Under regular appropriation.....	Pipe.	126.465	3,124	129.589
Under improved sewerage appropriation.....	Brick and Pipe.	26.894	1.552	28.376
Total miles of sewers....		190.440	5.837	196.277

During the year, 98 catch-basins, 93 extra inlets, and 235 manholes have been built, making a total in use December 31, 1903, of 4,596 catch-basins, 1,508 extra inlets, and 8,401 manholes.

During the quarter, the construction of the following sewers was completed, namely :

No. of resolution.	Date of approval.	Date of completion.
350.	Nov. 6, 1902, <i>Branch avenue, from Douglas to Veazie street,</i>	Oct. 31, 1903.
127.	April 7, 1903, <i>Atwells avenue, Pine and Broad streets,</i>	Nov. 18, 1903.
128.	" " " <i>Merino avenue from Manton to near the Merino bridge,</i>	Dec. 18, 1903.
129.	" " " <i>Weymouth street and Lloyd avenue,</i>	Oct. 17, 1903.
130.	" " " <i>Wayland, Cole and University avenues,</i>	Oct. 17, 1903.

No. of resolution.	Date of approval.	Date of completion.
228.	June 5, 1903, <i>North Main street, east side, from Stenton avenue to Third street,</i>	Nov. 14,
318.	Sept. 18, 1903, <i>Hilton street and California avenue,</i>	Dec. 4,
321.	" " " <i>Barnes street, from a low point west of Thayer to connect with Thayer street sewer — storm sewer,</i>	Sept. 29,

Work upon the following sewers was in progress at close of the quarter, namely:

No. of resolution.	Date of approval.
136.	April 7, 1903, <i>Section 30, Seekonk Division, Improvements Sewerage System.</i>
322.	Sept. 18, 1903, <i>Dudley street, from Pearl and to the head of the city dock.</i>

Work upon the following sewers, completing the ordered by the city council, had not commenced Dec. 31, 1903, namely:

No. of resolution.	Date of approval.
229.	June 5, 1903, <i>Reservoir avenue, west side, from cent street to Algonquin.</i>
230.	" " " <i>West Park and Bath streets.</i>
319.	Sept. 18, 1903, <i>Elton street, from a low point 10 east of Taber avenue to Elmgrove.</i>
320.	" " " <i>Vandewater street, from Douglas a to Branch.</i>



**SEWER MAINTENANCE DEPARTMENT.**  
The following table shows the work performed by the department cleaning sewers, basins and drains,  
for the year 1903:

MONTHS.	OLD WORK.						NEW WORK.										Total deposit re- moved, cubic yards.				
	OLD DRAINS.			SAND- CATCHERS.			OPEN DITCHES.			PUMPS.			SEWERS.					CATCH-BASINS.			
	Number.	Length in feet.	Deposit removed, cu. yards.	Number.	Deposit removed, cu. yards.	Length in feet.	Number.	Deposit removed, cu. yards.	Length in feet.	Deposit removed, cu. yards.	Dead ends.	No. times examined.	Number cleaned.	Deposit removed, cu. yards.							
January.....							20	226.34	1	800	36.23	.....	1	221	140.45	403.02					
February.....							2	16.68	2	7,850	68.27	.....	1	261	330.68	415.63					
March.....	1	475	10.16			2	725	20.37	14	172.00	72	14,700	35.26	.....	1	771	1,273.18	1,510.97			
April.....						1	1,100	40.74	8	97.59	10	4,700	56.45	.....	1	1,001	1,780.45	1,975.23			
May.....						1	1,200	66.67	8	128.81	12	2,800	26.07	.....	1	1,635	2,144.89	2,366.44			
June.....						6	1,800	52.79	14	254.00	2	900	6.90	.....	2	1,288	1,552.82	1,866.51			
July.....				3	8.00				5	125.92	3	800	13.64	90	1	1,497	1,996.81	2,144.37			
August.....	1	175	2.37	9	18.15				6	332.78	1	.....	18.15	.....	1	1,589	1,776.11	2,147.56			
September.....	2	350	13.00						7	123.69	48	7,462	37.61	.....	1	1,805	1,717.96	1,892.26			
October.....						1	475	12.04	6	72.46	61	21,000	30.26	50	1	1,774	1,735.20	1,849.96			
November.....	6	1,275	43.78						7	93.75	41	8,400	22.45	41	1	1,547	1,234.02	1,394.00			
December.....	1	150	6.14			3	500	30.44	15	154.26	62	15,000	32.00	.....	2	1,347	1,035.26	1,258.70			
Totals.....	11	2,425	75.45	12	26.15	14	5,900	223.05	112	1,798.28	315	88,012	383.89	181	14	14,826	16,717.83	19,224.65			

In addition to the accompanying form, the following work has been performed by the sewer maintenance department for the year 1903 :

#### WORK ON SEWERS.

Examined all sewers for condition and deposit, and all gates, slots, and sumps for same forty-eight times; also fifteen cellars on account of water in them. Repaired eleven holes over sewers, one house connection, fire box at brick station, two tide gates, two gates at precipitation tanks, and repaired and painted three gate houses. Replaced thirty-eight manhole frames and 159 covers, five track grates and one frame. Built one storm sewer 257.32 feet long, eight manholes, and one by-pass to old drain on Canal street. Reset 251 manhole frames. Cut in one five-inch, two eight-inch, ten six-inch and one twelve-inch connection. Put in one six-inch drain: removed roots from 101 sewers; brought two manholes to grade; flushed out pipe in lime-house at precipitation tanks twice, and one six-inch pipe at Doyle avenue and Camp street four times; puddled one ditch and abandoned two chutes.

#### WORK ON BASINS.

Flushed 2,799 traps and 1,896 chutes to basins. Built five basins and six chutes. Thawed out ten chutes. Cleaned snow from 2,703 inlets. Repaired twenty-four holes at basins, forty-nine basins, twenty chutes, and six basin connections. Replaced eighteen basin covers; abandoned one basin; reset fifty-two traps; put in three extra inlet frames and covers and eighteen extra traps.

#### OLD WORK.

Repaired sixteen old drains and five chutes. Levelled ten dumps and built five chutes.

#### MISCELLANEOUS WORK.

Flushed seventy-seven private connections, charged \$183.75; ten sewers and pumped out one, \$168.17; thawed out one pipe for health department, \$2.75; pumped out six cellars, \$25.43, and one fountain for J. W. Furlong, \$8.00; altered twenty-five manholes, built four chutes and two basins for Rhode Island Company, \$346.20; built two basins for sundries, \$36.03; filled three cisterns, \$6.00; cut in one eight-inch and two six-inch connections, \$60.65; puddled two ditches, \$58.75; repaired one basin, \$6.25; rebuilt one manhole, \$23.60; altered one drain and built two manholes, \$33.75, and filled one gas holder, \$15.75, for Providence Gas Company; built two basins, five chutes, two track grates for New York, New Haven and Hartford Railroad Company, \$132.05; drove test wells for Penniman & Maguire, \$33.50; repaired connection on Manton avenue, \$12.66; flooded skating rink for J. E. Sullivan, \$11.50.

For Park Department, Blackstone park: Built four basins, laid 101 feet of twelve-inch and ninety-five feet of fifteen-inch pipe, \$104.03.

# REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 25

For Merino Bridge: Built four basins, two chutes, one manhole, one twelve-inch storm sewer, 39.50 feet, set four grade posts, and built 11.06 feet of twenty-six inch brick sewer and 8.06 feet of eight-inch pipe sewer.

Carted coal for contingencies.

For Water Maintenance Department: Pounded and seeded banks at Hope and Sockanosset reservoirs; repaired one drinking fountain, one old drain at Sockanosset reservoir, and floor in boiler room at Hope station; carted fertilizer to Fruit Hill and Sockanosset reservoirs; removed ashes from Hope station eight times, and built two manholes for sprinklers.

For Sewer Construction Department—(regular): Built eight basins, twenty chutes, thirteen house connections, 18.67 feet of fifteen-inch, 181.92 feet of twelve-inch, and 75.90 feet of eight-inch pipe sewer; (storm sewers): built ten basins, seventeen chutes, 286.17 feet of fifteen-inch, and 809.83 feet of twelve-inch pipe, sewer, nine manholes and one house connection.

For Improved Sewerage Department: Built five basins, thirteen chutes, 18.17 feet of six-inch drain to curb, and thirty feet of twenty-inch brick sewer.

Altered ten manholes, for highway department; examined sewer in Branch avenue for sewer construction department; built six basins, twelve chutes, 195 feet of fifteen-inch, and 199 feet of twelve-inch pipe sewer, (old work); built four manholes on intake to brick station, (repairs).

The amount of bills approved on account of sewers from October 1 to December 31, 1903, inclusive, was as follows:

## FOR CONSTRUCTION.

Regular appropriation.....	\$42,736 80	
Improved sewerage appropriation. ....	26,467 52	
		\$69,204 32

## Charged as follows:

Contract reservations.....	\$10,307 00
Material.....	8,858 98
Sundries.....	1,016 43
Additional catch-basins.....	619 53
Testing cement.....	268 80
Tools.....	16 52
Sewer in Atwells avenue, Pine and Broad streets..	4,789 45
Sewer in Barnes street, from the low point in said street west of Thayer street to Thayer.....	55 08
Sewer in Branch avenue, from Douglas to Veazie street.....	3,243 13
Sewer in Branch avenue, from Langdon street to near the Moshassuck river.....	3,559 14
Sewer in Charles street, from near Amboy to Branch avenue.....	12 00
Amount carried forward.....	\$32,746 06

Amount brought forward.....	\$32,746 06
Sewer in Dudley street, from junction of Pearl and Plain to Eddy street, and across land of the city from Eddy street to the head of the city dock.....	3,711 44
Sewer in Hilton street, from Bogman to Willard avenue, and in California avenue, from Virginia to Eddy street.....	1,997 16
Sewer in Merino avenue, from Manton avenue to near Merino bridge.....	5,359 62
Sewer in North Main street, east side, from Stenton avenue to Third street.....	3,616 63
Sewer in Silver Spring street and Northup avenue.....	10
Sewer in Wayland, Cole, and University avenues.....	3,714 58
Sewer in Weymouth street and Lloyd avenue.. ...	2,979 51
Sewer in Branch avenue, from Veazie street to the river near Vandewater street.....	4 50
Sewer in Moshassuck Division, Section 27.....	2,523 36
Sewer in Moshassuck Division, Section 28.....	1,000 79
Sewer in Seekonk Division, Section 29.....	3 25
Sewer in Seekonk Division, Section 30.....	11,487 32
	<u>\$69,204 32</u>

For maintenance, . . . . . \*28,896 75

Classified as follows:

Cleaning basins and sewers.....	\$5,368 41
Repairing basins and sewers.....	3,140 10
Cleaning and repairing old drains.....	1,203 62
Use of water.....	900 00
Inspection of connections .....	683 72
Sundries.....	617 54
Barn expenses.....	548 83
Tools.....	548 34
Salary, superintendent.....	456 57
Horses, wagons, harnesses, etc.....	371 87
Office expenses.....	72 91
Cleaning private connections.....	40 00
Telephone lines.....	35 93
Car fares.....	15 00
Repairs on gate-house.....	14 44
Repairs on buildings.....	14 07
Filling cisterns, etc.....	10 83

#### ERNEST STREET STATION.

Coal and wood .....	1,334 80
Engineers .....	757 85
Cleaning screens.....	593 67
Amount carried forward.....	<u>\$16,728 50</u>

# REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 27

Amount brought forward.....	\$16,728 50
Firemen.....	429 78
Cleaning and repairing pumps.....	354 13
Supplies.....	215 47
Care of grounds.....	52 65
Lights.....	31 44
Repairs on boilers.....	30 82
Repairs on engines.....	16 33
Care of buildings.....	9 77
Repairs on buildings, sewer maintenance yard....	1 00

## SEWAGE PRECIPITATION TANKS.

Chemicals.....	5,064 47
Labor in sludge disposal.....	2,334 91
Labor on sewage precipitation.....	1,386 64
Electrical power.....	503 75
Repairs on machinery.....	331 89
Fuel.....	234 24
Miscellaneous supplies.....	169 12
Lights.....	42 60
Repairs on sewage precipitation tanks.....	35 03
Repairs on buildings.....	24 21

\$28,896 75

The *net* expenditure for construction of sewers to December 31, 1903, inclusive, was..... \$7,508,250 56

The *net* expenditure for maintenance of sewers to December 31, 1903, inclusive, was..... \$1,038,438 41

Bills deposited with the city treasurer for collection from October 1 to December 31, 1903, inclusive, amounted to . . . \$2,896 30

As follows :

Miscellaneous work.....	\$906 80
Old scrap tobin bronze.....	103 60
Cleaning private connections.....	45 25
Laying drains to curbstones.....	29 43
Pumping out cellars.....	10 83
Sewer material.....	1,795 19
Testing cement.....	5 20

\$2,896 30

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of . . . \$2,716 96

Amount brought forward.....	\$32,746 06
Sewer in Dudley street, from junction of Pearl and Plain to Eddy street, and across land of the city from Eddy street to the head of the city dock.....	3,711 44
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Sewer in Weymouth street and Lloyd avenue.. ...	2,979 51
Sewer in Branch avenue, from Veazie street to the river near Vandewater street.....	4 50
Sewer in Moshassuck Division, Section 27.....	2,523 36
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Sundries.....	617 54
Barn expenses.....	548 83
Tools.....	548 34
Salary, superintendent.....	456 57
Horses, wagons, harnesses, etc.....	371 87
Office expenses.....	72 91
Cleaning private connections.....	40 00
Telephone lines.....	35 93
Car fares.....	15 00
Repairs on gate-house.....	14 44
Repairs on buildings.....	14 07
Filling cisterns, etc.....	10 83

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Cleaning screens.....	593 67

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# REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 27

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\$2,896 30

During the quarter, coupons from bills  
collected have been returned by the city  
treasurer and receipted for to the amount  
of . . . . . \$2,716 96

Of the above amount of pavement relaid, the cost of relaying 17,200.57 square yards, amounting to \$19,441.26, was paid by the corporations for which the work was done.

During the year the following streets, aggregating 26.174+ miles, have been resurfaced, namely:

Acorn street, from Harris avenue to Kinsley.  
Admiral street, from Charles to Berkshire.  
Allston street, from River avenue to Walcott street.  
Alverson avenue, from Plainfield street to Hartford avenue.  
Angell street, from Wayland avenue to Prospect street.  
Armstrong avenue, from Brook street to East.  
Arthur avenue, from Atwells to Kenyon street.  
Atwells avenue, from Covell street to Manton avenue.  
Bainbridge avenue, from Westminster street to Broadway.  
Barton street, from Westminster to Broadway.  
Battey street, from Westminster to Vernon.  
Belmont avenue, from Carleton street to Mt. Pleasant avenue.  
Benefit street, from North Main to Wickenden.  
Blackstone street, from Broad to Prairie avenue.  
Blackstone boulevard, in part from Irving avenue to Rochambeau.  
Bough street, from Westminster to Dike.  
Branch avenue, from Moshassuck river to Vandewater street.  
Branch avenue, from Veazie street to Douglas avenue.  
Bridgham street, from Westminster to Cranston.  
Broad street, from Public to Thurbers avenue.  
Bucklin street, from Earl to Carter.  
Calverly street, from Smith to Edith.  
Cambridge street, from Academy avenue to Sears.  
Carleton street, from Chalkstone avenue to Hendrick street.  
Carpenter street, from Dean to Fountain.  
Cedar street, from Acorn to Dean.  
Cemetery street, from North Main to Frost.  
Central street, from Pearl to Bridgham.  
Chalkstone avenue, from Charles street to Black.  
Charles street, from Branch avenue to Peter street.  
Charles street, from Hagan street to city line.  
Chattlet street, from Hartford avenue to Barbara street.  
Coddling street, from Westminster to Cranston.  
Concannon street, from Moy to Veazie.  
Constitution street, from Lester to Wilson.  
Covell street, from Atwells avenue to Amherst street.  
Cypress street, from North Main to Hope.  
Dean street, from Atwells avenue to Cedar street.  
Delaine street, from Valley to Woonasquatucket river.  
Delaine street, from Appleton to Manton avenue.  
Doane avenue, from Elmgrove to Wayland.  
Douglas avenue, from Admiral street to Veazie.



Douglas avenue, from Branch to city line.  
 Douglas avenue, from Mowry street to Admiral.  
 East George street, from Governor to Gano.  
 Ellery street, from Chapin avenue to Willow street.  
 Elmwood avenue, from railroad bridge to city line.  
 Elmwood avenue, from West Friendship street to Adelaide avenue.  
 Erastus street, from Atwells avenue to Amherst street.  
 Esten street, from Smith to Orms.  
 Felix street, from Chalkstone avenue to Valley street.  
 Fountain street, from Dean to Carpenter.  
 Gilmore street, from Lester to Wilson.  
 Governor street, from Wickenden to Waterman.  
 Hammond street, from Westminster to Cranston.  
 Hartford avenue, from Heath street to city line.  
 Hudson street, from Messer to Huntington avenue.  
 Hyat street, from Amherst to Manton avenue.  
 Jewett street, from Calverly to 300 feet westerly.  
 Joslin street, from Atwells avenue to Manton.  
 Judith street, from Lena to near Sterling avenue.  
 Lavaughn street, from Atwells avenue to Amherst street.  
 Livingstone street, from North Main to Printery.  
 Lockwood street, from Broad to Pine.  
 Logan avenue, from Prairie to Ocean street.  
 Manton avenue, from Florence street to King.  
 Manton avenue, from Unit street to Egan.  
 McKinley street, from Elmwood avenue to Roger Williams park.  
 Medway street, from Butler avenue to Ives street.  
 Norwood avenue, from Roger Williams park easterly 300 feet.  
 Ocean street, from Public to Thurbers avenue.  
 Orms street, from Valley to Smith.  
 Park avenue, from Cranston line east to Cranston line west.  
 Pearl street, from Plain to Prairie avenue.  
 Plain street, from Point to Public.  
 Plainfield street, from Union avenue to city line.  
 Pocasset avenue, from Plainfield street to Webster avenue.  
 Pond street, from Stewart to Summer.  
 Prairie avenue, from Public street to Broad.  
 President avenue, from Arlington to Elmgrove.  
 Printery street, from Randall to Livingstone.  
 Promenade street, from Calverly to Acorn.  
 Regent avenue, from River to Walcott street.  
 Robin street, from Regent avenue to Allston street.  
 Sayles street, from Burnside to Prairie avenue.  
 Smith street, from city line easterly 1,200 feet.  
 Smithfield avenue, from Branch to Moshassuck river.  
 Smithfield avenue, from Ledge street to city line.  
 Spruce street, from Acorn to Brayton avenue.  
 Sunset avenue, from Killingly street to city line.  
 Summer street, from Westminster to Broad.  
 Thayer street, from Angell to Charles Field.  
 Thompson street, from Wickenden to Tockwotton.

Tobey street, from Westminster to Broadway.  
 Valley street, from Felix to Orms.  
 Valley street, from Westminster to Atwells avenue.  
 Veazie street, from Branch avenue to Woodward road.  
 Villa avenue, from Arlington to Taber.  
 Waterman street, from Wayland avenue to Prospect street.  
 Wayland avenue, from Angell street to Waterman.  
 West Clifford street, from Point to Dudley.  
 West Friendship street, from Broad to Elmwood avenue.  
 Whittier avenue, from Plainfield street to Gifford.  
 Whitney street, from Elmwood avenue to Alger.  
 Wickenden street, from East to Gano.  
 Wilson street, from Elmwood avenue to Harrison street.  
 Willow street, from Messer to Ellery.  
 Wood street, from Messer to Huntington avenue.  
 Woodward road, from Illinois street to city line.

.397 + miles of streets have been rebuilt during the year, namely :

Branch avenue, from Veazie street to bridge near Vandewater.  
 Hay street, from Pine to Friendship.  
 Friendship street, from Hay to Peck.

2.253 + miles of streets have been graded during the year, namely :

Allens avenue, from Sayles street to Seymour.  
 Alumni avenue, from Weymouth street to Arlington avenue.  
 Croyland road, from Oxford street to Sayles.  
 Douglas avenue, from Branch to city line.  
 Hastings street, from Northup avenue to Ledge street.  
 Hilton street, from Willard avenue to near Bogman street.  
 Ledge street, from Hastings to Smithfield avenue.  
 Manton avenue, from Unit street to Egan.  
 Northup avenue, from Horton street to Silver Spring.  
 Park avenue, from Cranston line east to Cranston line west.  
 Rosedale street, from Messer to Ellery.  
 Sayles street, from Prairie avenue to Gordon.  
 Silver Spring street, from Ashton to Northup avenue.  
 Smithfield avenue, from Ledge street to city line.  
 Troop lane, from Charles street to Walling.

During the quarter, the following work was completed :

#### SIDEWALKS TO BE CURBED AND GUTTERS PAVED.

Date of order.

Sept. 17, 1903, *Report avenue, from Harvard street to River avenue.*

**Date of order.**

Oct. 15, 1903, *Sayles street, from Gordon avenue to Prairie.*  
“ “ “ *Croyland road, from Oxford street to Sayles.*

**TO BE PAVED.**

**No. of resolution. Date of approval.**

231. June 5, 1903, *Branch avenue, from Veazie street to bridge near Vandewater.*

The following work was in progress December 31, 1903, namely :

**SIDEWALKS TO BE CURBED AND GUTTERS PAVED.**

**Date of order.**

Oct. 15, 1903, *Morris avenue, from Cypress street to Olney.*

**TO GRADE AND PUT IN GOOD CONDITION.**

June 18, 1903, *Hastings and Ledge streets.*

The following work, ordered by the board of aldermen and city council, had not commenced December 31, 1903, namely :

**SIDEWALKS TO BE CURBED AND GUTTERS PAVED.**

**Date of order.**

Nov. 20, 1902, *Egan street, from Manton avenue to the bridge.*

June 18, 1903, *Bath street, from Orms to Calverley.*

“ “ “ *Wayland avenue, from Lloyd to Irving.*

“ “ “ *Cole avenue, from Lloyd to Irving.*

“ “ “ *University avenue, from Elmgrove to Slater.*

Bills approved on account of highways from October 1 to December 31, 1903, inclusive, amounted to :

Regular appropriation.....	\$92,653 20	
Special appropriation.....	870 19	
	<hr/>	\$93,523 3

## Classified as follows:

Crushed stone—material and labor.....	\$19,191 55	
Repairs on unpaved streets.....	15,003 45	
Cleaning streets.....	14,402 46	
Repairs on paved streets.....	5,310 93	
Barn expenses.....	3,335 98	
Blacksmith and wheelwright shop.....	2,077 34	
Repairs on stone crushers.....	1,742 10	
Stone—paving and crosswalk.....	1,572 94	
Repairs on buildings, highway yard.....	1,445 31	
Tools, implements, etc.....	783 95	
Steam rollers—repairs and supplies.....	745 94	
Horses, wagons, harnesses, etc.....	723 67	
Labor on material.....	602 67	
Superintendent's salary.....	422 57	
Building driveways, etc.....	387 11	
Watering streets.....	242 46	
Watchman at city yard.....	149 14	
Sundries.....	145 96	
Office expenses, city yard.....	77 15	
Fencing streets—material and labor.....	44 34	
Car fares.....	10 00	
Telephone lines.....	5 35	
	<hr/>	\$68,422 7

NEW WORK — BUILDING AND REBUILD-  
ING STREETS, ETC.

## SIDEWALKS CURBED AND GUTTERS PAVED.

<i>Croyland road</i> , from Oxford street to Sayles.....	\$883 50	
<i>Douglas avenue</i> , from Chad Brown street to Admiral.....	870 19	
<i>Morris avenue</i> , from Cypress street to Olney.....	4,670 25	
<i>Promenade street</i> , north side, from Leland to Cal- verley.....	980 74	
<i>Regent avenue</i> , from Harold street to River avenue.....	1,067 91	
<i>Sachs street</i> , from Gordon avenue to Prairie.....	1,126 85	
<i>Steel Spring street</i> , from Ashton to Northup avenue.....	706 98	
	<hr/>	10,906

## PAVE WITH GRANITE BLOCKS, ASPHALT OR BITUMINOUS MACADAM.

<i>Beech avenue</i> , from Veunie street to bridge near Vandewater street.....	11,784 7
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## GRADE AND PUT IN GOOD CONDITION

<i>Hastings and College streets</i> .....	2,800
	<hr/>
	\$93,523 3

Bills deposited with the city treasurer  
for collection from October 1 to December  
31, 1903, inclusive, amounted to . . . \$17,574 98

As follows :

Labor and material.....	\$15,676 21
Building driveways, etc.....	896 19
Boarding horses for other departments.....	503 93
Street sweepings.....	318 75
Manure from barn.....	71 00
Use of steam rollers.....	51 00
Removing trees.....	32 00
Discharging cargoes at city wharf.....	21 00
Oil barrels.....	4 90
	<hr/>
	\$17,574 98

During the quarter, coupons from bills  
collected have been returned by the city  
treasurer and receipted for to the amount of \$7,147 76

As follows :

Labor and material.....	\$4,354 58
Building driveways, etc.....	1,082 46
Blacksmith and harness work done for other de- partments.....	509 34
Boarding horses for other departments.....	503 93
Street sweepings.....	359 05
Use of steam rollers.....	209 50
Manure from barn.....	71 00
Removing trees.....	32 00
Discharging cargoes at city wharf.....	21 00
Oil barrels.....	4 90
	<hr/>
	\$7,147 76

#### SIDEWALKS AND CURBING.

Bills approved on account of sidewalks  
and curbing from October 1 to December  
31, 1903, inclusive, amounted to . . . \$4,417 15

## Charged as follows :

Granite curbing.....	\$3,667 27
Concreting sidewalks.....	607 98
Repairing sidewalks and gutters.....	141 90
	<u>\$4,417 15</u>

Bills deposited with the city treasurer for collection from October 1 to December 31, 1903, inclusive, amounted to \$2,260 95

## As follows :

Granite curbing.....	\$2,206 97
Concreting sidewalks.....	53 98
	<u>\$2,260 95</u>

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$312 09

## As follows :

Granite curbing.....	\$258 11
Concreting sidewalks.....	53 98
	<u>\$312 09</u>

## CITY ENGINEER.

Bills approved on account of the city engineer's department from October 1 to December 31, 1903, inclusive, amounted to \$11,203 62

## Charged as follows :

Salary — city engineer.....	\$1,125 00
Salaries of assistants.....	8,977 02
Salaries of clerks.....	755 03
Car fares.....	203 60
Supplies — drawing material, etc.....	129 87
Meteorological instruments and repairs.....	7 02
Carriage hire.....	2 68
Instruments and repairs.....	2 25
Sundries.....	1 15
	<u>\$11,203 62</u>

## BRIDGES.

The following work was in progress at the end of the quarter, namely :

### TO BUILD BRIDGE AND APPROACHES.

No. of resolution. Date of approval.

220. June 20, 1902, *Over Woonasquatucket river at Egan and Chatlett streets.*
411. Dec. 19, " *Exchange bridge on its northerly side ; bridge over the river between Exchange and Burnside bridges ; River walls between Burnside and Exchange bridges.*

Bills approved on account of bridges from  
October 1 to December 31, 1903, inclusive,  
amounted to . . . . . \$5,023 92

Charged as follows :

Acorn street bridge.....	\$4 10
Barn expenses.....	137 28
Branch avenue culvert.....	19 61
Building at city yard.....	63
Burnside bridge.....	6 82
Cemetery street bridge.....	4 51
Crawford street bridge.....	168 66
Eagle street bridge.....	9 55
Francis street bridge.....	7 65
Hawkins street bridge.....	8 55
Horses, wagons, harnesses, etc.....	20 82
Lumber, hardware, etc.....	220 94
Manton avenue bridge.....	231 96
Point street bridge.....	1,058 53
Promenade street bridge.....	38 54
Randall street bridge.....	1 00
Red bridge.....	372 47
Rent of keeper's house—Washington bridge.....	36 00
Salaries — Point street bridge.....	953 25
Amount carried forward.....	\$3,300 87

## Charged as follows :

Granite curbing.....	\$3,667 27
Concreting sidewalks.....	607 98
Repairing sidewalks and gutters.....	141 90
	<u>\$4,417 15</u>

Bills deposited with the city treasurer for collection from October 1 to December 31, 1903, inclusive, amounted to \$2,260 95

## As follows :

Granite curbing.....	\$2,206 97
Concreting sidewalks.....	53 98
	<u>\$2,260 95</u>

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$312 09

## As follows :

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Lumber, hardware, etc.....	220 94
Manton avenue bridge.....	231 96
Point street bridge.....	1,058 53
Promenade street bridge.....	38 54
Randall street bridge.....	1 00
Red bridge.....	372 47
Rent of keeper's house — Washington bridge.....	36 00
Salaries — Point street bridge.....	953 25
Amount carried forward.....	\$3,300 87

## PUBLIC WORKS OFFICE.

Bills approved on account of the public works office from October 1 to December 31, 1903, inclusive, amounted to . . .

\$5,498 00

## Charged as follows:

Salaries of commissioner and secretary .....	\$1,850 00
Salaries of office assistants.....	3,267 38
Office supplies.....	238 84
Telephone lines.....	133 84
Carriage hire.....	3 00
	<hr/>
	\$5,493 06

## CONTINGENCIES.

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of

\$111 00

## As follows:

Inspection of electric wires .....	\$111 00
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WALTER F. SLADE,

*Commissioner.*

1904.]

CITY DOCUMENT.

[No. 14.]

EIGHTY-FIFTH  
QUARTERLY REPORT

OF THE

★  
Department of Public Works

OF THE

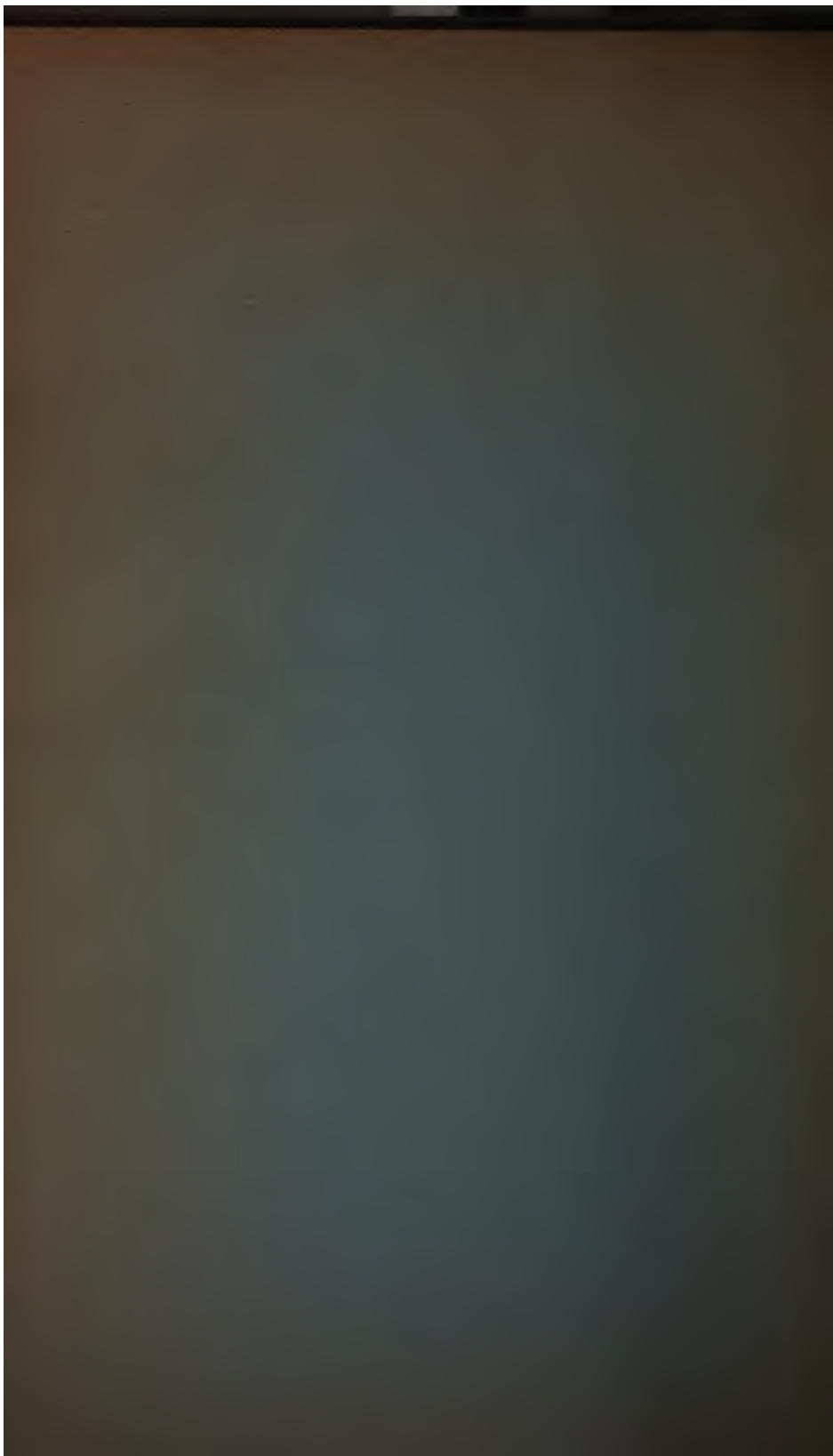
CITY OF PROVIDENCE, R. I.

QUARTER ENDING MARCH 31, 1904.



City of Providence Press:  
SNOW & FARMAN, CITY PRINTERS,  
63 Washington Street,  
1904.

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TILDEN FOUNDATION  
1905



1904.]

CITY DOCUMENT.

[No. 14.]

EIGHTY-FIFTH  
QUARTERLY REPORT

OF THE

Department of Public Works

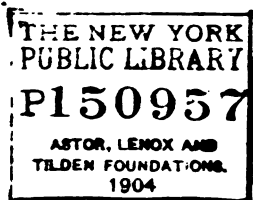
OF THE

CITY OF PROVIDENCE, R. I.

QUARTER ENDING MARCH 31, 1904.



**The Providence Press:**  
**SNOW & FARNHAM, CITY PRINTERS,**  
63 Washington Street,  
1904.



# REPORT.

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OFFICE OF THE DEPARTMENT OF PUBLIC WORKS, }  
CITY HALL, PROVIDENCE, R. I., April 1, 1904. }

TO THE HONORABLE THE CITY COUNCIL:

In compliance with the requirements of Chapter 41 of the ordinances, the Commissioner of Public Works respectfully presents the eighty-fifth quarterly report of the expenditures by the several departments under his direction and control, with statements of work ordered and the condition and cost of same, for the quarter ending March 31, 1904.

## WATER WORKS.

January 6th, the proposal of the Warren Foundry and Machine Company to furnish 501 tons of cast iron water pipe of various sizes at \$27.40 per gross ton, was accepted and a contract for the same subsequently executed.

February 3d, a contract was executed with the De Laval Steam Turbine Company to furnish and deliver at Pettaconset pumping station one 50 K. W. turbine generator, for the sum of \$2,800.00.

February 9th, the proposal of the Fuller Iron Works to furnish certain special castings for the high pressure fire service at two cents per pound, was accepted.

The average daily consumption of water during the last quarter was 14,086,612 gallons.

Water pipes were laid during the quarter as follows :

8-INCH.

In Montgomery avenue..... 433.67 feet.

6-INCH.

In Spencer street; and in Edgewood avenue in the town of  
Cranston..... 458.34 feet.

Total..... 892.01 feet.

or 0.168 + mile.

Water pipes were abandoned or removed during the quarter as follows :

6-INCH.

From Manchester street..... 193.17 feet.  
or 0.036+ mile.

Statement of sizes and lengths of pipe laid since the commencement of the work :

36-inch .....	10,084.00 feet.
30-inch .....	61,328.30 feet.
24-inch .....	43,758.29 feet.
20-inch .....	9,626.59 feet.
16-inch .....	33,812.95 feet.
12-inch .....	104,991.24 feet.
10-inch .....	15,057.14 feet.
8-inch .....	291,143.58 feet.
6-inch .....	1,231,561.64 feet.
Total.....	1,801,363.73 feet.

or, 341.167 + miles.

Statement of sizes and lengths of pipe laid for the special water service for fire protection since the commencement of the work :

24-inch .....	4,188.58 feet.
16-inch .....	23,004.37 feet.
12-inch .....	2,215.76 feet.
Total.....	29,408.71 feet.

or, 5.569 + miles.



Five fire hydrants have been set during the quarter, one in each of the following locations:

Anthony avenue, north side, 170 feet west of building line of Avon street.  
Salem street, west side, 3 feet south of building line of Waldo street.

Seabury street, west side, 210 feet south of building line of Potters avenue.

Sorrento street, southeast side, 3 feet northeast of line of Benedict street.

Wadsworth street, northeast side, 224 feet southeast of line of Sorrento street.

The total number of fire hydrants, exclusive of those for special service for fire protection, is now nineteen hundred and ninety-four—eighteen hundred and ninety-one flush, and one hundred and three post.

The total number of fire hydrants on the special water service for fire protection is ninety-two.

During the quarter, one hundred and twelve water meters were set, of which number forty-six were to replace other meters. The use of eight meters was discontinued.

The following meters were in use at the close of the quarter:

KIND.	SIZE.									Total.
	$\frac{1}{2}$ -in.	$\frac{3}{4}$ -in.	1-in.	1 $\frac{1}{2}$ -in.	2-in.	3-in.	4-in.	6-in.	8-in.	
Ball & Fitts.....	2,115	435	103	11	5					2,669
Ball & Fitts, rotary...			4	7		2	1			14
Crown.....	9,379	1,092	322	139	37	24	25	1		11,019
Empire.....	960	137	62	45	13	1	1			1,219
Fales, Jenks & Sons..			1							1
Gem.....					12	29	16	3		60
Thomson.....	4,218	424	75	53	22	7	7	2		4,808
Trident.....	102		1							103
Venturi.....									1	1
Worthington.....	1				1					2
	16,775	2,088	568	255	90	63	50	6	1	19,896

One hundred and seventeen plumbers' licenses were issued during the quarter, all of which expire December 31, 1904.

Six hundred and seven permits to do plumbing work were issued during the quarter.

Forty-one applications for water were made during the quarter, making the total number twenty-six thousand one hundred and twenty-five.

The number of new service stops opened during the quarter was forty-three.

The total number of service stops opened to March 31, 1904, inclusive, was twenty-five thousand four hundred and sixty-five. The number in actual use March 31, 1904, was twenty-three thousand three hundred and three.

The amount of bills approved on account of water works from January 1, to March 31, 1904, inclusive, was:

For maintenance, . . . . . \$51,453 40

Classified as follows:

PETTACONSET PUMPING STATION.

Coal and wood.....	\$4,674 19	
Sundries. ....	751 32	
Engineers.....	637 32	
Firemen.....	594 00	
Superintendence.....	345 00	
Labor on fuel.....	203 80	
Repairs on boilers.....	141 46	
Oil, waste and packing.....	90 74	
Barn expenses.....	46 05	
Worthington high-duty engine.....	39 64	
Care of grounds.....	24 00	
Corliass pumping engine and house.....	18 60	
Lights.....	16 50	
Cornish engine house.....	8 43	
		<hr/>
		\$7,651 05
Amount carried forward.....		<hr/>
		\$7,651 05

REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 7

Amount brought forward.....		\$7,651 05
<b>SOCKANOSSET RESERVOIR.</b>		
Watchman.....	\$168 00	
Sundries.....	26 90	
		194 90
<b>HOPE PUMPING STATION.</b>		
Firemen.....	\$384 30	
Coal and wood.....	286 53	
Engineers.....	276 00	
Lights.....	59 60	
Sundries.....	54 90	
Oil, waste and packing.....	8 50	
Repairs on boilers.....	6 69	
		1,076 52
<b>HOPE RESERVOIR.</b>		
Watchman.....		189 00
<b>FRUIT HILL RESERVOIR.</b>		
Watchman.....	\$189 00	
Sundries.....	156 72	
		345 72
<b>METER DEPARTMENT.</b>		
Setting and repairing meters.....	\$1,522 28	
Water meters.....	581 71	
		2,103 99
<b>PIPE LINE AND SERVICE STOPS.</b>		
Repairs.....	\$3,828 98	
Inspection of pipe line and services.....	1,136 87	
Superintendence — salaries.....	783 00	
		5,748 85
<b>PIPE YARD.</b>		
Cast iron water pipe.....	\$14,413 95	
Laying water pipe.....	5,710 32	
Special castings.....	1,727 71	
Stop valves.....	1,495 00	
Taps and stops.....	967 23	
Fire hydrants, boxes and covers.....	950 00	
Tools.....	514 04	
Laying service pipe.....	456 87	
Pig lead and tin.....	391 73	
Labor on and carting pipe.....	162 13	
Pipe yard, office expenses.....	52 30	
		26,841 28
Amount carried forward.....		\$44,151 31

Amount brought forward.....	\$44,151 31
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**MISCELLANEOUS.**

Thawing out water pipes.....	\$4,172 12	
Clerks' and inspectors' salaries .....	1,425 60	
Barn expenses. ....	634 53	
Prevention of defilement of the Pawtuxet.....	549 99	
Horses, wagons, harnesses, etc.....	348 96	
Sundries.....	95 89	
Car fares. ....	75 00	
		7,302 09
		\$51,453 40

For construction, . . . . .	\$6,866 49
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**Charged as follows:**

Installation of sand filtration plant at Pettaconset, . . . . .	\$6,866 49.
---	-------------

The total expenditures to March 31, 1904, inclusive, was . . . . .	\$9,655,395 07
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The net expenditure for maintenance from January 1 to March 31, 1904, inclusive, was.....	\$46,558 13
---	-------------

The net expenditure for maintenance to March 31, 1904, inclusive, was.....	\$2,041,317 42
--	----------------

The net expenditure for construction from January 1 to March 31, 1904, inclusive, was .....	\$6,866 49
---	------------

The value of the water works system, January 1, 1904, as estimated by the city engineer, was as follows:

Pettaconset pumping station.....	\$340,694 00	
Hope pumping station .....	126,530 12	
Sockanosset, Hope and Fruit Hill reservoirs.....	706,531 26	
Main lines and distribution pipes.....	2,703,862 95	
Real estate in Pawtuxet and Lincoln .....	15,975 00	
Tools and supplies.....	44,939 96	
		\$3,938,533 29

Bills deposited with the city treasurer for collection from January 1 to March 31, 1904, inclusive, amounted to . . . . .	\$441,248 06
---	--------------

## As follows :

Water.....	\$435,745 75	
Water meters.....	2,469 25	
Setting and repairing meters.....	1,554 52	
Labor and material, laying services, etc., .....	1,174 79	
Penalties.....	148 00	
Rent of real estate .....	143 00	
Repairs on pipe line.....	7 75	
Permanently closing service stops.....	5 00	
		\$441,248 06

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$437,622 56

## As follows :

Water.....	\$432,579 28	
Water meters.....	2,464 25	
Setting and repairing meters.....	1,352 81	
Labor and material, laying services, etc.....	838 11	
Rent of real estate.....	151 75	
Penalties.....	148 00	
Repairs on pipe line.....	83 36	
Permanently closing service stops.....	5 00	
		\$437,622 56

## SEWERS.

During the quarter ending March 31, 1904, ninety permits were issued to drain-layers — thirty for new work and sixty for extension and repairs of drains.

One hundred and twenty-seven drain-layers' licenses were issued during the quarter, all of which expire December 31, 1904.

February 2d, the proposal of J. H. Lane & Company to furnish and deliver 5,000 yards of No. 13 chain cloth at 29 cents per yard, was accepted.

February 23d, contracts for the construction of the following sewers were awarded and subsequently executed, namely:

[The amounts given below are what are estimated will be paid the contractors for labor, and do not include the cost of inspection and materials or rock excavation.]

TO FREDERICK E. SHAW.

No. of resolution. Date of approval.

52.	Feb.	2, 1904,	<i>Rosedale street, from Messer to Ellery,</i>	\$774 00
53.	"	"	<i>Admiral street, from Hillwood to end of present sewer in Admiral,</i>	638 70
55.	"	"	<i>Algonquin street, from Crescent to Holmes,</i>	668 50
56.	"	"	<i>Ninth and Pettis streets,</i>	712 50
57.	"	"	<i>Washington avenue, from Virginia to Eddy street,</i>	996 70
58.	"	"	<i>Thayer, Manning and Brook streets, (storm sewer),</i>	13,947 55
60.	"	"	<i>Alverson, Eastwood, Laurel Hill and Hart- ford avenues,</i>	12,673 95

TO CHARLES CRANKSHAW.

54.	Feb.	2, 1904,	<i>Chalkstone avenue, from Lisbon street to River avenue,</i>	\$625 65
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TO FRANK A GAMMINO.

59.	Feb.	2, 1904,	<i>Fairview and Pemberton streets,</i>	\$849 66
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During the quarter, the construction of the following sewer was completed, namely:

No. of resolution.	Date of approval.	Date of completion.
136.	April 7, 1903, <i>Section 30, Seekonk Division, Improved Sewerage System,</i>	Jan. 12, 1904.

Work upon the following sewers was in progress at the close of the quarter, namely:

No. of resolution.	Date of approval.
230.	June 5, 1903, <i>West Park and Bath streets.</i>
322.	Sept. 18, 1903, <i>Dudley street, from Pearl and Plain to the head of the city dock.</i>
59.	Feb. 2, 1904, <i>Fairview and Pemberton streets.</i>

Work upon the following sewers, completing the work ordered by the city council, had not commenced March 31, 1904, namely:

No. of resolution.	Date of approval.
229.	June 5, 1903, <i>Reservoir avenue, west side, from Crescent street to Algonquin.</i>
319.	Sept. 18, 1903, <i>Elton street, from a low point 100 feet east of Taber avenue to Elmgrove.</i>
320.	" " " <i>Vandewater street, from Douglas avenue to Branch.</i>
52.	Feb. 2, 1904, <i>Rosedale street, from Messer to Ellery.</i>
53.	" " " <i>Admiral street, from Hillwood to end of present sewer in Admiral.</i>
54.	" " " <i>Chalkstone avenue, from Lisbon street to River avenue.</i>
55.	" " " <i>Algonquin street, from Crescent to Holmes.</i>
56.	" " " <i>Ninth and Pettis streets.</i>
57.	" " " <i>Washington avenue, from Virginia to Eddy street.</i>

No. of resolution. Date of approval.

58. Feb. 2, 1904, *Thayer, Manning and Brook streets,*  
(*storm sewer*).  
60. " " " *Alverson, Eastwood, Laurel Hill and*  
*Hartford avenues.*

The amount of bills approved on account of sewers from January 1 to March 31, 1904, inclusive, was as follows:

FOR CONSTRUCTION.

Regular appropriation.....	\$3,827 86	
Improved sewerage appropriation. ....	4,464 26	
		<u>\$8,292 12</u>

Charged as follows:

Material.....	\$1,345 77
Contract reservations.....	528 09
Sundries.....	275 02
Testing cement.....	138 25
Tools.....	3 05
Sewer in Dudley street, from junction of Pearl and Plain to Eddy street, and across land of the city from Eddy street to the head of the city dock.....	1,050 48
Sewer in Fairview and Pemberton streets.....	54 53
Sewer in West Park and Bath streets.....	443 17
Sewer in Seekonk Division, Section 30.....	4,453 76
	<u>\$8,292 12</u>

For maintenance, . . . . . \$29,578 33

Classified as follows:

Cleaning basins and sewers.....	\$7,080 75
Repairing basins and sewers.....	3,294 37
Tools.....	1,035 78
Inspection of connections.....	598 92
Cleaning and repairing old drains.....	516 33
Barn expenses.....	460 99
Salary, superintendent.....	408 00
Horses, wagons, harnesses, etc.....	328 56
Office expenses.....	95 07
	<u>\$13,818 77</u>
Amount carried forward.....	\$13,818 77



**REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 13**

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Amount brought forward .....	\$13,818 77
Cleaning private connections.....	54 00
Telephone lines.....	30 10
Repairs on buildings.....	28 43
Car fares.....	25 00
Sundries.....	20 90
Repairs on gate-house.....	37

**ERNEST STREET STATION.**

Coal and wood .....	1,508 72
Engineers .....	831 33
Cleaning screens.....	622 38
Firemen.....	427 69
Cleaning and repairing pumps.....	395 28
Supplies.....	79 87
Care of grounds .....	62 42
Lights.....	33 36
Repairs on engines.....	25 76
Repairs on boilers.....	20 95
Repairs on buildings.....	5 50
Care of buildings .....	5 11

**SEWAGE PRECIPITATION TANKS.**

Chemicals .....	5,282 49
Labor in sludge disposal.....	2,400 93
Labor on sewage precipitation.....	1,606 94
Miscellaneous supplies.....	1,403 23
Electrical power.....	466 50
Fuel.....	308 24
Repairs on buildings.....	56 47
Lights.....	34 68
Repairs on machinery.....	22 91
	<hr/> \$29,578 33

The *net* expenditure for construction of sewers to March 31, 1904, inclusive, was..... \$7,516,403 44

The *net* expenditure for maintenance of sewers to March 31, 1904, inclusive, was..... \$1,067,772 35

Bills deposited with the city treasurer  
for collection from January 1 to March  
31, 1904, inclusive, amounted to . . . \$198 64

## As follows :

Sewer material.....	\$108 74
Cleaning private connections .....	85 00
Testing cement.....	4 90
	<hr/>
	\$198 64

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of . . . . . \$383 63

## As follows :

Miscellaneous work.....	\$170 64
Sewer material. ....	130 34
Cleaning private connections .....	62 25
Filling cisterns, etc.....	11 50
Testing cement.....	8 90
	<hr/>
	\$383 63

## HIGHWAYS.

One permit to open street was issued during the quarter.

February 10th, the proposal of James Beaton to furnish and deliver circular curbing to the amount of \$162.50, was accepted.

February 10th, the proposal of Nelson A. Bennett to furnish and deliver circular curbing, was accepted. Amount, \$162.50.

Statements have been prepared of the cost of curbstones, ascertained by the commissioner and certified to the board of aldermen for approval, as follows :

Bolander street, from Abbott to Grandview.....	\$713 95
Calais street, from Jewett to West Park.....	289 66
Croyland road, from Oxford street to Sayles .....	551 76
Hamlin street, from Roger Williams park to Elmwood avenue.	892 79
Hazael street, from Douglas avenue to General street.....	309 82
Laurel Hill avenue, from present curbing to Pocasset.....	633 21
Lenox avenue, from Melrose street to Hamilton.....	769 73
Moses Brown street, from Angell to South Angell.....	436 99
Phillips street, from Hope to Morris avenue.....	708 16
Promenade street, north side, from Leland to Calverley.....	430 24
Regent avenue, from Harold street to River avenue.....	688 34
Sayles street, from Gordon avenue to Prairie.....	548 32
Sears avenue, from Atwells to its northerly termination.....	704 97
Silver Spring street, from Ashton to Northup avenue.....	1,668 68
Suffolk street, from Admiral to Salina.....	456 14
Tuxedo avenue, from Amherst street to Atwells avenue.....	360 82
Wallace street, from Webster avenue to Priscilla.....	690 78
	<hr/>
	\$10,854 36

The following work was in progress March 31, 1904, namely:

#### SIDEWALKS TO BE CURBED AND GUTTERS PAVED.

Date of order.

Nov. 20, 1902, *Egan street, from Manton avenue to the bridge.*

Oct. 15, 1903, *Morris avenue, from Cypress street to Olney.*

#### TO GRADE AND PUT IN GOOD CONDITION.

June 18, 1903, *Hastings and Ledge streets.*

The following work, ordered by the board of aldermen and city council, had not commenced March 31, 1904, namely:

#### SIDEWALKS TO BE CURBED AND GUTTERS PAVED.

Date of order.

June 18, 1903, *Bath street, from Orms to Calverley.*

“ “ “ *Wayland avenue, from Lloyd to Irving.*

“ “ “ *Cole avenue, from Lloyd to Irving.*

“ “ “ *University avenue, from Elmgrove to Slater.*

## Date of order.

Dec. 17, 1903, *Hilton street, from Willard avenue to Bogman street.*

Jan. 21, 1904, *Elton street, from Taber avenue to Elmgrove.*

Bills approved on account of highways  
from January 1 to March 31, 1904, inclu-  
sive, amounted to:

\$43,007 64

## Classified as follows:

Removing snow and ice.....	\$21,135 62
Crushed stone—material and labor.....	4,951 38
Cleaning streets.....	2,675 20
Barn expenses.....	2,664 42
Blacksmith and wheelwright shop.....	2,603 13
Steam rollers—repairs and supplies.....	2,146 52
Repairs on stone crushers.....	1,635 50
Stone—paving and crosswalk.....	787 30
Labor on material.....	738 40
Tools, implements, etc.....	554 45
Repairs on buildings, highway yard.....	506 61
Superintendent's salary.....	442 00
Repairs on unpaved streets.....	337 00
Horses, wagons, harnesses, etc.....	213 13
Watchman at city yard.....	156 00
Office expenses, city yard.....	72 99
Sundries.....	47 17
Repairs on paved streets.....	23 23
Car fares.....	20 00
Building driveways, etc.....	16 50
Fencing streets—material and labor.....	11 00
Telephone lines.....	5 35
	<hr/>
	\$41,742 90

NEW WORK — BUILDING AND REBUILD-  
ING STREETS, ETC.

## TO GRADE AND PUT IN GOOD CONDITION.

<i>Hastings and Ledge streets.....</i>	<hr/> 1,264 74
	\$43,007 64

Bills deposited with the city treasurer  
for collection from January 1 to March  
31, 1904, inclusive, amounted to . . . \$2,237 38

## As follows :

Blacksmith and harness work done for other departments.....	\$931 80
Labor and material.....	632 11
Boarding horses for other departments.....	273 84
Street sweepings.....	249 45
Manure from barn.....	68 00
Building driveways, etc.....	57 68
Discharging cargoes at city wharf.....	19 50
Removing snow and ice.....	5 00
	<hr/>
	\$2,237 38

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$15,191 15

## As follows :

Labor and material.....	\$14,096 44
Blacksmith and harness work done for other departments.....	418 54
Boarding horses for other departments.....	273 84
Street sweepings.....	193 15
Building driveways, etc.....	86 18
Manure from barn.....	68 00
Use of steam rollers.....	51 00
Removing snow and ice.....	5 00
	<hr/>
	\$15,191 15

## SIDEWALKS AND CURBING.

Bills approved on account of sidewalks and curbing from January 1 to March 31, 1904, inclusive, amounted to \$532 31

## Charged as follows :

Concreting sidewalks.....	\$434 48
Repairing sidewalks and gutters.....	97 83
	<hr/>
	\$532 31

During the quarter, coupons from curbing bills were returned by the city treasurer and receipted for to the amount of . . . \$1,999 52

### CITY ENGINEER.

Bills approved on account of the city engineer's department from January 1 to March 31, 1904, inclusive, amounted to \$12,161 75

#### Charged as follows :

Salary — city engineer.....	\$1,125 00
Salaries of assistants.....	9,750 25
Salaries of clerks.....	789 75
Supplies — drawing material, etc.....	243 06
Car fares.....	202 30
Instruments and repairs.....	23 84
Telephone lines.....	22 87
Carriage hire.....	4 13
Sundries.....	30
Meteorological instruments and repairs.....	25
	<hr/>
	\$12,161 75

### BRIDGES.

February 17th, a contract for furnishing and erecting the steel superstructure of Post Office bridge, and Exchange bridge widening, was awarded to Lewis F. Shoemaker & Company, Philadelphia, Pa., and the same was subsequently executed.

The following work was in progress at the end of the quarter, namely :

## TO BUILD BRIDGE AND APPROACHES.

No. of resolution. Date of approval.

220. June 20, 1902, *Over Woonasquatucket river at Egan and Chatlett streets.*
411. Dec. 19, " *Exchange bridge on its northerly side ; bridge over the river between Exchange and Burnside bridges ; River walls between Burnside and Exchange bridges.*

Bills approved on account of bridges from  
January 1 to March 31, 1904, inclusive,  
amounted to . . . . . \$3,862 29

## Charged as follows:

Acorn street bridge.....	\$1 80
Barn expenses.....	115 34
Building at city yard.....	4 95
Car fares.....	25 15
Crawford street bridge.....	88 35
Exchange bridge.....	9 35
Francis street bridge.....	3 47
Horses, wagons, harnesses, etc.....	13 47
Lumber, hardware, etc.....	3 50
Manton bridge.....	60
Manton avenue bridge.....	13 05
Merino bridge.....	2 28
Point street bridge.....	541 94
Promenade street bridge.....	5 20
Randall street bridge.....	1 80
Red bridge.....	136 55
Rent of keeper's house — Washington bridge.....	36 00
Salaries — Point street bridge.....	978 25
Salaries — Red bridge.....	531 50
Salaries — Washington bridge.....	513 50
Sundries.....	405 20
Telephone lines.....	2 68
Tools.....	151 23
Washington bridge.....	210 37
Waybosset bridge.....	66 76
	<hr/>
	\$3,862 29

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Bills deposited with the city treasurer  
for collection from January 1 to March  
31, 1904, inclusive, amounted to **\$700 64**

As follows :

Lumber, hardware, etc..... **\$700 64**

During the quarter, coupons from bills  
collected have been returned by the city  
treasurer and receipted for to the amount of **\$700 64**

As follows :

Lumber, hardware, etc..... **\$700 64**

Bills approved for account of building  
the Merino bridge, from January 1 to  
March 31, 1904, inclusive, have been  
paid from the special appropriation for that  
work, to the amount of **\$1,198 8**

Bills approved for account of building  
the river walls between the Burnside and  
Exchange bridges, from January 1 to  
March 31, 1904, inclusive, have been  
paid from the special appropriation for that  
work, to the amount of **\$475 4**

#### PUBLIC LIGHTS.

Bills approved on account of the public  
lights from January 1 to March 31, 1904,  
inclusive, amounted to **\$69,325 4**

Charged as follows :



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Arc lights.....	\$51,039 65
Incandescent lights.....	11,864 97
Welsbach lights.....	5,866 65
Salaries.....	420 00
Setting and removing gas posts.....	65 71
Gas for street lights.....	63 60
Car fares.....	5 00
	<hr/>
	\$69,325 58

### PUBLIC WORKS OFFICE.

Bills approved on account of the public works office from January 1 to March 31, 1904, inclusive, amounted to . . \$4,969 77

#### Charged as follows:

Salaries of commissioner and secretary.....	\$1,850 00
Salaries of office assistants.....	2,917 78
Office supplies.....	201 99
	<hr/>
	\$4,969 77

### CONTINGENCIES.

Bills approved for the inspection of electric wires from January 1 to March 31, 1904, inclusive, have been paid from the appropriation for contingencies to the amount of . . . . . \$2 00

WALTER F. SLADE,  
*Commissioner.*



1904.]

CITY DOCUMENT.

[No. 17.]

EIGHTY-SIXTH  
QUARTERLY REPORT

OF THE

Department of Public Works

OF THE

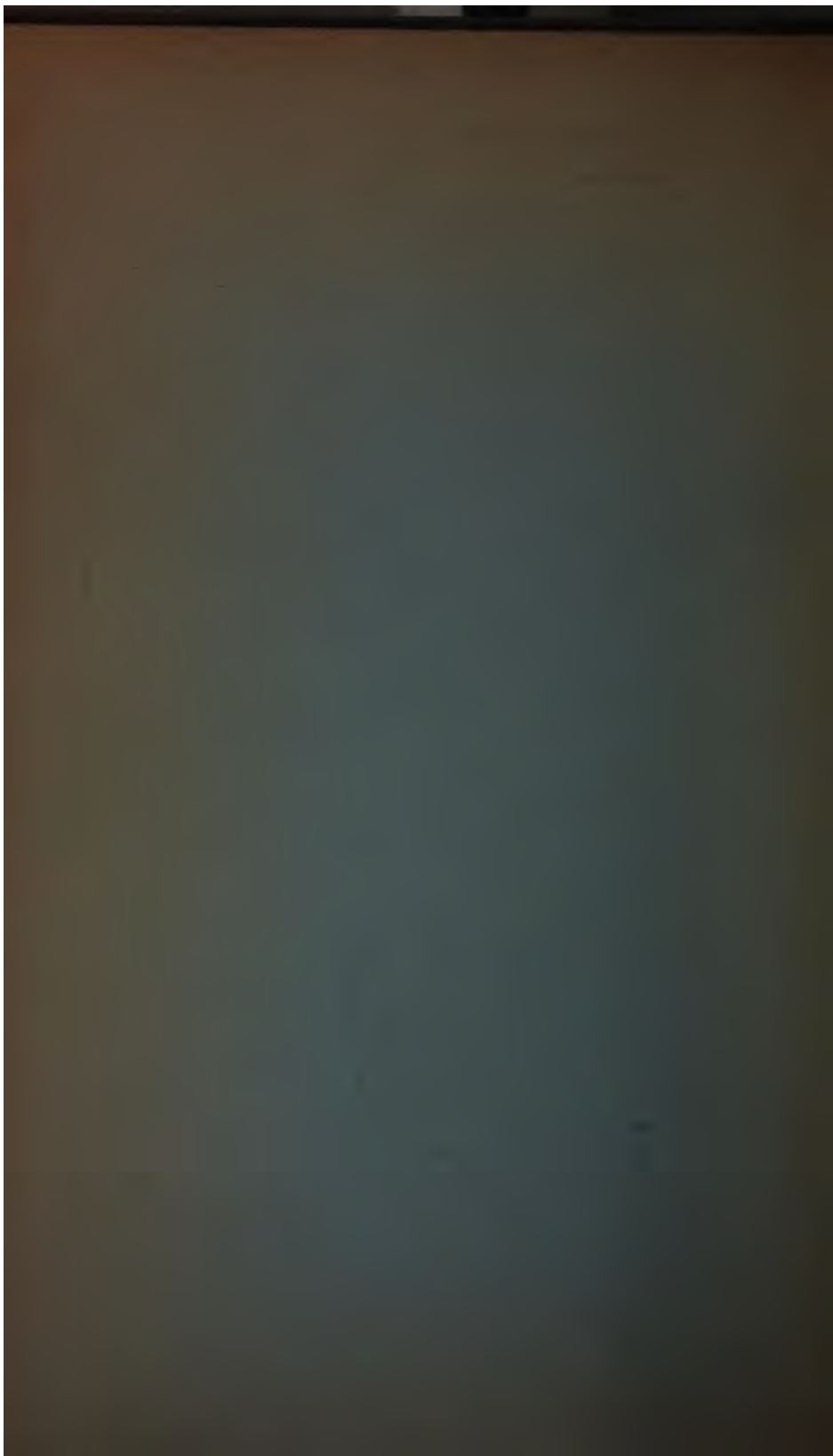
CITY OF PROVIDENCE, R. I.

QUARTER ENDING JUNE 30, 1904.



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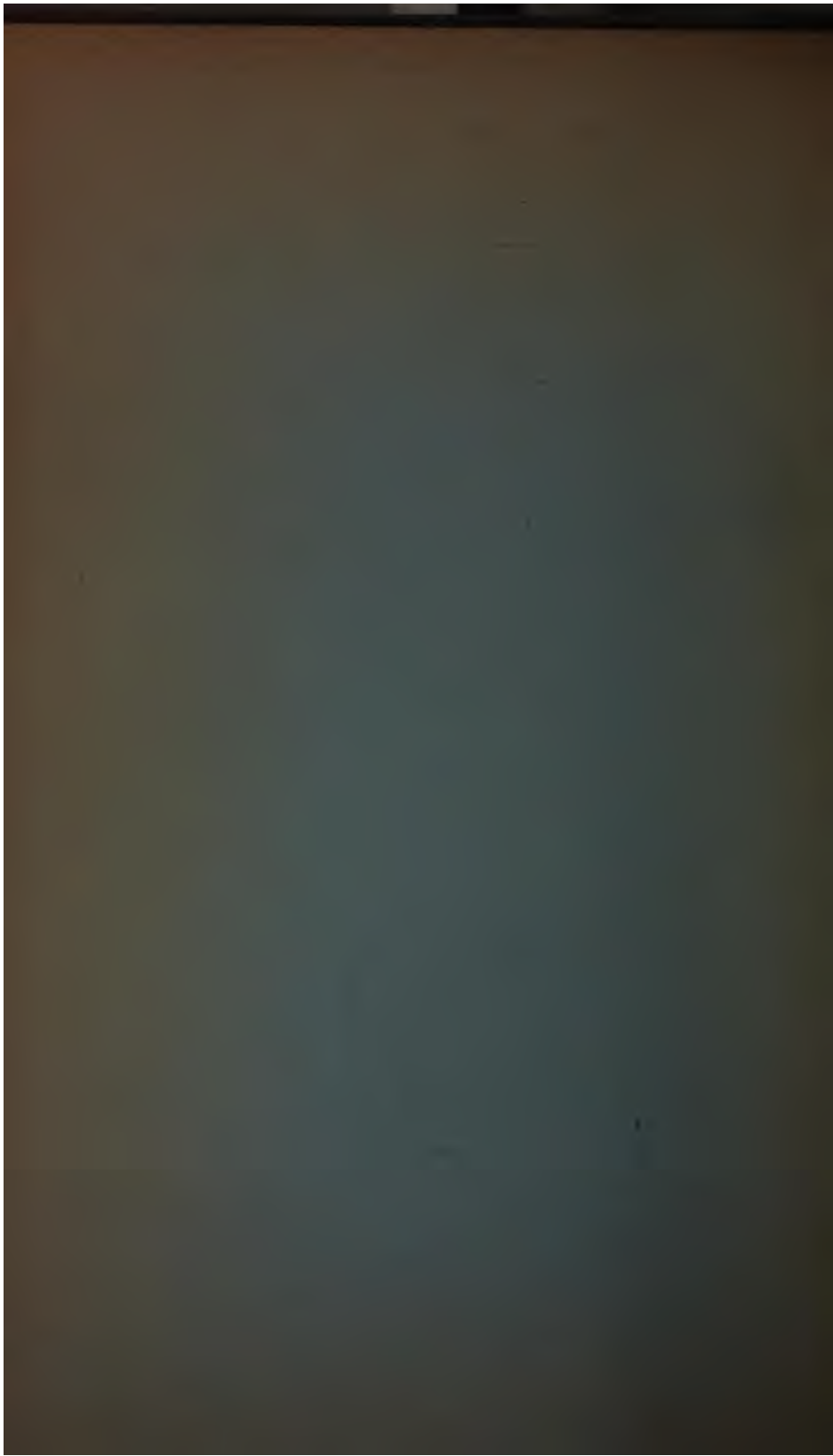
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OF THE  
**Department of Public Works**  
OF THE  
CITY OF PROVIDENCE, R. I.

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The Providence Press:  
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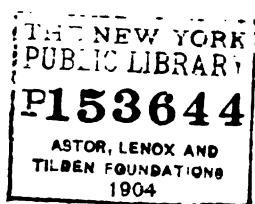
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QUARTERLY REPORT  
OF THE  
**Department of Public Works**  
OF THE  
CITY OF PROVIDENCE, R. I.

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QUARTER ENDING JUNE 30, 1904.



The Providence Press:  
SNOW & FARNHAM, CITY PRINTERS,  
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1904.





# REPORT.

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OFFICE OF THE DEPARTMENT OF PUBLIC WORKS, }  
CITY HALL, PROVIDENCE, R. I., July 1, 1904. }

TO THE HONORABLE THE CITY COUNCIL:

In compliance with the requirements of Chapter 41 of the ordinances, the Commissioner of Public Works respectfully presents the eighty-sixth quarterly report of the expenditures by the several departments under his direction and control, with statements of work ordered and the condition and cost of same, for the quarter ending June 30, 1904.

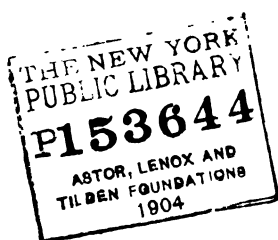
## WATER WORKS.

April 4th, the proposal of the Allis Chalmers Company, of Milwaukee, Wis., to furnish and erect a 25,000,000 gallon high-duty pumping engine at Pettaconset, was accepted and a contract subsequently executed. Amount \$95,000.00.

April 29th, the proposal of the Wheeler Condenser and Engineering Company to furnish for the Pettaconset pumping station a Wheeler admiralty surface condenser, for the sum of \$940.00, f. o. b. New York, was accepted.

May 25th, the proposal of the Alphons Custodis Chimney Construction Company to erect at the Pettaconset pumping station a chimney 150 feet high and 7 feet diameter, for the sum of \$5,000.00, was accepted.

June 3d, the proposal of the Providence Coal Company to furnish and deliver at Pettaconset 400 tons of New River coal during June, 1904, at \$3.62½ per net ton, was accepted.



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**P153644**

ASTOR, LENOX AND  
TILDEN FOUNDATIONS  
1904

LEAF SEVEN

1904.]

CITY DOCUMENT.

[No. 17.]

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EIGHTY-SIXTH  
QUARTERLY REPORT  
OF THE  
**Department of Public Works**  
OF THE  
CITY OF PROVIDENCE, R. I.

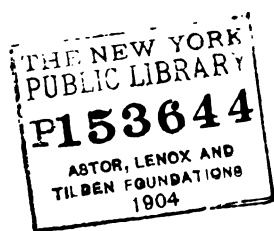
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QUARTER ENDING JUNE 30, 1904.



The Providence Press:  
SNOW & FARNHAM, CITY PRINTERS,  
63 Washington Street,

1904.



THE NEW YORK  
PUBLIC LIBRARY

**P153644**

ASTOR, LENOX AND  
TILDEN FOUNDATIONS  
1904

KIND.	SIZE.									Total.
	$\frac{1}{8}$ -in.	$\frac{1}{4}$ -in.	1-in.	1 $\frac{1}{2}$ -in.	2-in.	3-in.	4-in.	6-in.	8-in.	
Ball & Fitts.....	2,071	427	100	11	5					2,614
Ball & Fitts, rotary...			4	7		2	1			14
Crown.....	9,425	1,104	327	143	38	25	25	1		11,088
Empire.....	1,002	143	63	46	13	1	1			1,269
Fales, Jenks & Sons..			1							1
Gem.....					13	28	16	3		60
Thomson.....	4,335	424	75	53	22	7	7	2		4,925
Trident.....	102		1							103
Venturi.....									1	1
Worthington.....	1				1					2
	16,936	2,098	571	260	92	63	50	6		120,077

Nine plumbers' licenses were issued during the quarter, making the total number one hundred and twenty-six, all of which expire December 31, 1904.

Seven hundred and ninety-eight permits to do plumbing work were issued during the quarter.

Two hundred and sixty-six applications for water were made during the quarter, making the total number twenty-six thousand three hundred and eighty-one.

The number of new service stops opened during the quarter was two hundred and one.

The total number of service stops opened to June 30, 1904, inclusive, was twenty-five thousand six hundred and sixty-six. The number in actual use June 30, 1904, was twenty-three thousand six hundred and forty-four.

The amount of bills approved on account of water works from April 1, to June 30, 1904, inclusive, was:

June 7th, the proposal of the Eastern Coal Company to furnish all the egg size anthracite coal needed to July 1, 1905, at \$5.15 per net ton, at their yard, was accepted.

June 23d, the proposal of the Pocasset Ice Company to furnish the ice required in the various drinking fountains during the season of 1904, for the sum of \$2.25 per ton, was accepted.

June 29th, the proposal of The Congdon and Carpenter Company to furnish and deliver at the city yard 10,000 pounds of AAA  $\frac{5}{8}$ -inch lead pipe for \$5.20 per 100 pounds, was accepted.

The proposal of the Eastern Coal Company to furnish and deliver at Hope pumping station the No. 2 buckwheat anthracite coal needed to July 1, 1905, at \$2.48 per net ton, was accepted.

June 30th, the proposal of the Eastern Coal Company to furnish and deliver at Pettaconset during July, 1904, 400 tons of New River coal at \$3.58 per net ton, was accepted.

The average daily consumption of water during the last quarter was 12,908,326 gallons.

Water pipes were laid during the quarter as follows :

8-INCH.

In Admiral, East River, Pitman and South Angell streets;  
and in Smith street in the town of North Providence.... 2,578.41 feet.

6-INCH.

In Dryden lane; Montcalm and Rodney courts; Augusta, Broom, Cumberland, Devonshire, Dickens, Eighth Ianthe, Longfellow, Pilgrim, Stone, Tell, Tenth, Veto and West Park streets; Carrington, Edgemere and Massie avenues; in Strathmore road; Dover, Lancaster and Smith streets; Lynn, Lowell and Richfield avenues in the town of Cranston..... 6,012.39 feet.

Total..... 8,590.80 feet.  
or 1.627 + mile.

KIND.	SIZE.									Total.
	$\frac{3}{4}$ -in.	$\frac{1}{2}$ -in.	1-in.	1 $\frac{1}{4}$ -in.	2-in.	3-in.	4-in.	6-in.	8-in.	
Ball & Fitts.....	2,071	427	100	11	5	.....	.....	.....	.....	2,614
Ball & Fitts, rotary...	.....	.....	4	7	.....	2	1	.....	.....	14
Crown.....	9,425	1,104	327	143	38	25	25	1	.....	11,088
Empire.....	1,002	143	63	46	13	1	1	.....	.....	1,269
Fales, Jenks & Sons...	.....	.....	1	.....	.....	.....	.....	.....	.....	1
Gem.....	.....	.....	.....	.....	13	28	16	3	.....	60
Thomson.....	4,335	424	75	53	22	7	7	2	.....	4,925
Trident.....	102	.....	1	.....	.....	.....	.....	.....	.....	103
Venturi.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1
Worthington.....	1	.....	.....	.....	1	.....	.....	.....	.....	2
	16,936	2,098	571	260	92	63	50	6	.....	120,077

Nine plumbers' licenses were issued during the quarter, making the total number one hundred and twenty-six, all of which expire December 31, 1904.

Seven hundred and ninety-eight permits to do plumbing work were issued during the quarter.

Two hundred and sixty-six applications for water were made during the quarter, making the total number twenty-six thousand three hundred and eighty-one.

The number of new service stops opened during the quarter was two hundred and one.

The total number of service stops opened to June 30, 1904, inclusive, was twenty-five thousand six hundred and sixty-six. The number in actual use June 30, 1904, was twenty-three thousand six hundred and forty-four.

The amount of bills approved on account of water works from April 1, to June 30, 1904, inclusive, was:

For maintenance, . . . . . \$37,809

Classified as follows:

**PETTACONSET PUMPING STATION.**

Coal and wood.....	\$3,921 48	
Sundries.....	783 53	
Engineers.....	634 53	
Firemen.....	521 30	
Superintendence.....	373 75	
Care of grounds.....	267 01	
Allis Chalmers high-duty engine, to furnish and erect.....	150 00	
Labor on fuel.....	144 73	
Repairs on boilers.....	79 97	
Barn expenses.....	59 41	
Oil, waste and packing.....	33 88	
Corliss pumping engine and house.....	25 19	
Worthington high-duty engine.....	15 93	
Cornish engine house.....	5 46	
Lights.....	2 90	
Real estate.....	2 88	
		\$7,021

**SOCKANOSSET RESERVOIR.**

Sundries.....	\$253 39	
Watchman.....	182 00	
		43

**HOPE PUMPING STATION.**

Coal and wood.....	\$438 65	
Firemen.....	403 90	
Engineers.....	299 00	
Repairs on boilers.....	224 85	
Sundries.....	48 11	
Lights.....	45 20	
Oil, waste and packing.....	12 65	
Holly pumping engine.....	4 43	
		1,47

**HOPE RESERVOIR.**

Sundries.....	\$431 93	
Watchman.....	204 75	
		63

**FRUIT HILL RESERVOIR.**

Sundries.....	\$917 16	
Watchman.....	204 75	
		1,12

Amount carried forward..... \$10,691



# REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 9

Amount brought forward..... \$10,692 72

## METER DEPARTMENT.

Water meters.....	\$3,580 11	
Setting and repairing meters.....	1,844 16	
		5,424 27

## PIPE LINE AND SERVICE STOPS.

Repairs.....	\$3,616 65	
Inspection of pipe line and services.....	953 67	
Superintendence—salaries.....	849 25	
		5,419 57

## PIPE YARD.

Laying water pipe.....	\$4,286 43	
Special castings.....	3,381 58	
Fire hydrants, boxes and covers.....	2,230 03	
Laying service pipe.....	1,439 28	
Stop valves.....	467 00	
Taps and stops.....	246 56	
Service pipe.....	213 30	
Tools.....	185 79	
Labor on and carting pipe.....	138 15	
Pipe yard, office expenses.....	10 57	
Repairs on pipe yard buildings.....	3 98	
Cast iron water pipe.....	2 20	
		12,604 87

## MISCELLANEOUS.

Clerks' and inspectors' salaries.....	\$1,544 40	
Barn expenses.....	650 27	
Prevention of defilement of the Pawtuxet.....	549 99	
Horses, wagons, harnesses, etc.....	305 25	
Telephone lines.....	245 36	
Inspection of water pipe with reference to electro- lysis.....	182 13	
Car fares.....	65 00	
Sundries.....	48 35	
Thawing out water pipes.....	46 50	
Public drinking fountains and troughs.....	31 05	
		3,668 30
		\$37,809 73

For construction, . . . . . \$18,007 85

Charged as follows :

Installation of sand filtration plant at Pettaconset, \$18,007 85.

The total expenditure to June 30,  
1904, inclusive, was . . . . . \$9,711,21

The *net* expenditure for maintenance from April 1 to  
June 30, 1904, inclusive, was..... \$29,

The *net* expenditure for maintenance to June 30, 1904,  
inclusive, was..... \$2,071,

The *net* expenditure for construction from July 1, 1902, to  
June 30, 1904, inclusive, was..... \$124,

The value of the water works system,  
January 1, 1904, as estimated by the city  
engineer, was as follows :

Pettaconset pumping station.....	\$340,694 00
Hope pumping station .....	126,530 12
Sockanosset, Hope and Fruit Hill reservoirs.....	706,531 26
Main lines and distribution pipes.....	2,703,862 95
Real estate in Pawtuxet and Lincoln .....	15,975 00
Tools and supplies.....	44,939 96
	<hr/> \$3,938,

Bills deposited with the city treasurer  
for collection from April 1 to June 30,  
1904, inclusive, amounted to . . . . . \$88,23

As follows :

Water.....	\$79,001 66
Water meters.....	3,585 25
Setting and repairing meters.....	3,346 96
Labor and material, laying services, etc., .....	1,907 06
Repairs on pipe line .....	165 67
Rent of real estate .....	96 75
Penalties.....	50 00
Old rubber.....	25 30
Permanently closing service stops.....	15 00
Blue prints of water distribution.....	4 00
Freight on turbine generator, from Boston.....	40 66
	<hr/> \$88,

During the quarter, coupons from bills  
collected have been returned by the city  
treasurer and receipted for to the amount of \$92,49.

As follows :

Water.....	\$84,336 72	
Water meters.....	3,580 00	
Labor and material, laying services, etc.....	2,153 95	
Setting and repairing meters.....	2,019 95	
Repairs on pipe line.....	173 42	
Rent of real estate.....	96 75	
Penalties.....	50 00	
Old rubber.....	25 30	
Permanently closing service stops.....	15 00	
Blue prints of water distribution.....	4 00	
Freight on turbine generator from Boston.....	40 66	
		<hr/>
		\$92,495 75

## SEWERS.

During the quarter ending June 30, 1904, three hundred and sixty-four permits were issued to drain-layers — one hundred and ninety-one for new work and one hundred and seventy-three for extensions and repairs of drains.

Fifteen drain-layers' licenses were issued during the quarter, making the total number one hundred and forty-two, all of which expire December 31, 1904.

During the quarter, assessments for the cost of constructing sewers were certified to the city treasurer as follows :

Wallace street, from near Webster avenue to Priscilla.....	\$990 43
Jewett street, from a point about 510 feet east of Valley to Valley.	1,628 65
North Main street, east side, from Stenton avenue to Third street.	1,631 64
Weymouth street and Lloyd avenue.....	3,837 27
Hilton street and California avenue.....	3,853 75
Tuxedo and Regent avenues.....	3,115 20
Wayland, Cole and University avenues .....	5,558 20
Branch avenue, from near Langdon street to near Moshassuck river.....	14,047 03
Branch avenue, from near Langdon street to Veazie .....	12,860 20
Algonquin street and Reservoir avenue.....	1,261 58
	<hr/>
Amount carried forward.....	\$48,783 95

The total expenditure to June 30,  
1904, inclusive, was . . . . . \$9,711,212 66

The *net* expenditure for maintenance from April 1 to  
June 30, 1904, inclusive, was..... \$29,741 36

The *net* expenditure for maintenance to June 30, 1904,  
inclusive, was..... \$2,071,058 78

The *net* expenditure for construction from July 1, 1902, to  
June 30, 1904, inclusive, was..... \$124,665 55

The value of the water works system,  
January 1, 1904, as estimated by the city  
engineer, was as follows :

Pettaconset pumping station.....	\$340,694 00
Hope pumping station .....	126,530 12
Sockanosset, Hope and Fruit Hill reservoirs.....	706,531 26
Main lines and distribution pipes.....	2,703,862 95
Real estate in Pawtuxet and Lincoln .....	15,975 00
Tools and supplies.....	44,939 96
	<hr/> \$3,938,533 29

Bills deposited with the city treasurer  
for collection from April 1 to June 30,  
1904, inclusive, amounted to . . . . . \$88,238 31

As follows :

Water.....	\$79,001 66
Water meters.....	3,585 25
Setting and repairing meters.....	3,346 96
Labor and material, laying services, etc., .....	1,907 06
Repairs on pipe line .....	165 67
Rent of real estate .....	96 75
Penalties.....	50 00
Old rubber.....	25 30
Permanently closing service stops.....	15 00
Blue prints of water distribution.....	4 00
Freight on turbine generator, from Boston.....	40 66
	<hr/> \$88,238 31

During the quarter, coupons from bills  
collected have been returned by the city  
treasurer and receipted for to the amount of \$92,495 75

As follows:

Water.....	\$84,336 72	
Water meters.....	3,580 00	
Labor and material, laying services, etc.....	2,153 95	
Setting and repairing meters.....	2,019 95	
Repairs on pipe line.....	173 42	
Rent of real estate.....	96 75	
Penalties.....	50 00	
Old rubber.....	25 30	
Permanently closing service stops.....	15 00	
Blue prints of water distribution.....	4 00	
Freight on turbine generator from Boston.....	40 66	
		<hr/>
		\$92,495 75

## SEWERS.

During the quarter ending June 30, 1904, three hundred and sixty-four permits were issued to drain-layers — one hundred and ninety-one for new work and one hundred and seventy-three for extensions and repairs of drains.

Fifteen drain-layers' licenses were issued during the quarter, making the total number one hundred and forty-two, all of which expire December 31, 1904.

During the quarter, assessments for the cost of constructing sewers were certified to the city treasurer as follows:

Wallace street, from near Webster avenue to Priscilla.....	\$990 43
Jewett street, from a point about 510 feet east of Valley to Valley.	1,628 65
North Main street, east side, from Stenton avenue to Third street.	1,631 64
Weymouth street and Lloyd avenue.....	3,837 27
Hilton street and California avenue.....	3,853 75
Tuxedo and Regent avenues.....	3,115 20
Wayland, Cole and University avenues .....	5,558 20
Branch avenue, from near Langdon street to near Moshassuck river.....	14,047 03
Branch avenue, from near Langdon street to Veazie .....	12,860 20
Algonquin street and Reservoir avenue.....	1,261 58
	<hr/>
Amount carried forward.....	\$48,783 95

Amount brought forward .....	\$48,783 46
Branch avenue, from Douglas to Veazie street.....	7,350 73
Silver Spring street and Northup avenue.....	6,318 48
India and South Main streets, Section 29.....	2,041 82
Cemetery street, from North Main to Frost.....	2,723 17
Atwells avenue, Pine and Broad streets.....	5,036 66
Charles street, from near Amboy to Branch avenue.....	7,703 43
Hamilton, Irving and Melrose streets.....	270 00
Longfellow street, Section 7.....	315 00
	<hr/>
	\$80,543 24

June 3d, the proposal of the Providence Coal Company to furnish and deliver at Ernest street station during June, 100 tons of New River or Pocahontas coal at \$3.35 per net ton, was accepted.

June 7th, the following proposals for furnishing the anthracite coal required to July 1, 1905, were accepted, viz.:

John R. White & Son, \$5.75 per net ton, for egg size, delivered at sewage precipitation tanks.

Eastern Coal Company, \$5.15 per net ton, for egg size, delivered at city yard.

June 30th, the proposal of the Eastern Coal Company to furnish and deliver at Ernest street station during July, 100 tons of New River coal at \$3.33 per net ton, was accepted.

June 21st, contracts for the construction of the following sewers were awarded and subsequently executed, namely:

[The amounts given below are what are estimated will be paid the contractors for labor, and do not include the cost of inspection and materials or rock excavation.]

#### TO FREDERICK E. SHAW.

No. of resolution. Date of approval.

201. June 7, 1904, *Barre street, from  
Grove to about 1,300 feet  
northerly; also westerly  
through right of way  
across tracks of N. Y.  
N. H. and H. R. R. Co.  
to Harris avenue, . . .* \$1,934 70

No. of resolution. Date of approval.

202.	June 7, 1904,	<i>Veazie street, from Douglas avenue to Branch,</i>	\$2,147 30
203.	" " "	<i>Tanner, Laban and Conanicut streets,</i>	747 20
219.	June 17, 1904,	<i>Exchange place, from Exchange street to the river,</i>	2,548 60

During the quarter, the construction of the following sewers was completed, namely:

No. of resolution. Date of approval.

Date of completion.

229.	June 5, 1903,	<i>Reservoir avenue, west side, from Crescent street to Algonquin.</i>	May 27, 1904.
230.	" " "	<i>West Park and Bath streets.</i>	May 6, 1904.
52.	Feb. 2, 1904,	<i>Rosedale street, from Messer to Ellery,</i>	June 7, 1904.
54.	" " "	<i>Chalkstone avenue, from Lisbon street to River avenue,</i>	April 20, 1904.
55.	" " "	<i>Algonquin street, from Crescent to Holmes,</i>	May 28, 1904.
57.	" " "	<i>Washington avenue, from Virginia to Eddy street,</i>	May 14, 1904.
59.	" " "	<i>Fairview and Pemberton streets,</i>	Apr. 26, 1904.

Work upon the following sewers was in progress at the close of the quarter, namely:

No. of resolution. Date of approval.

320.	Sept. 18, 1903,	<i>Vandewater street, from Douglas avenue to Branch.</i>
------	-----------------	--

No. of resolution. Date of approval.

322. Sept. 18, 1903, *Dudley street, from Pearl and Plain to the head of the city dock.*  
 58. Feb. 2, 1904, *Thayer, Manning and Brook streets, (storm sewer).*  
 56. " " " *Ninth and Pettis streets.*  
 60. " " " *Alverson, Eastwood, Laurel Hill and Hartford avenues.*  
 203. June 7, 1904, *Tanner, Laban, and Conanicut streets.*

Work upon the following sewers, completing the work ordered by the city council, had not commenced June 30, 1904, namely:

No. of resolution. Date of approval.

319. Sept. 18, 1903, *Elton street, from a low point 100 feet east of Taber avenue to Elmgrove.*  
 53. Feb. 2, 1904, *Admiral street, from Hillwood to end of present sewer in Admiral.*  
 201. June 7, 1904, *Barre street, from Grove to about 1,300 feet northerly; also westerly through right of way across tracks of N. Y. N. H. and H. R. R. Co. to Harris avenue.*  
 202. " " " *Veazie street, from near Douglas avenue to Branch.*  
 219. June 17, 1904, *Exchange place, from Exchange street to the river.*

The amount of bills approved on account of sewers from April 1 to June 30, 1904, inclusive, was as follows:

FOR CONSTRUCTION.

Regular appropriation.....	\$51,045 88	
Improved sewerage appropriation.....	295 05	
		<u>\$51,340 93</u>



## Charged as follows :

Material.....	\$18,647 13
Contract reservations.....	1,739 34
Sundries.....	909 78
Additional catch-basins.....	429 10
Testing cement.....	267 82
Tools.....	8 88
Sewer in Algonquin street, from Crescent to Holmes	789 32
Sewer in Alverson, Eastwood, Laurel Hill and Hartford avenues.....	1,864 63
Sewer in Chalkstone avenue from Lisbon street to River avenue.....	814 41
Sewer in Dudley street, from junction of Pearl and Plain to Eddy street, and across land of the city from Eddy street to the head of the city dock.....	12,886 98
Sewer in Fairview and Pemberton streets.....	998 16
Sewer in Ninth and Pettis streets.....	220 61
Sewer in Reservoir avenue, west side, from Crescent street to Algonquin.....	859 57
Sewer in Rosedale street, from Messer to Ellery...	852 23
Sewer in Tanner, Laban and Conanicut streets....	28 55
Sewer in Thayer, Manning and Brook streets.....	1,532 83
Sewer in Vandewater street, from Douglas avenue to Branch.....	3,989 91
Sewer in Washington avenue, from Virginia to Eddy street.....	1,377 72
Sewer in West Park and Bath streets.....	3,103 96
	<hr/>
	\$51,340 93

For maintenance, . . . . . \$28,271 23

## Classified as follows :

Cleaning basins and sewers.....	\$6,825 53
Repairing basins and sewers.....	3,869 52
Cleaning and repairing old drains.....	1,215 81
Inspection of connections.....	691 08
Tools.....	490 04
Salary, superintendent.....	442 00
Barn expenses.....	432 47
Sundries.....	199 67
Horses, wagons, harnesses, etc.....	129 89
Filling cisterns, etc.....	53 89
Cleaning private connections.....	42 00
Telephone lines.....	35 93
Car fares.....	10 00
Office expenses.....	7 32
Repairs on buildings,—sewer maintenance, yard..	4 95
	<hr/>
Amount carried forward.....	\$14,450 10

Amount brought forward..... \$14,450 10

**ERNEST STREET STATION.**

Coal and wood .....	\$1,521 52
Engineers .....	809 48
Cleaning screens .....	629 98
Firemen .....	420 40
Cleaning and repairing pumps .....	391 96
Care of grounds .....	123 58
Supplies .....	73 47
Repairs on engines .....	39 74
Lights .....	25 54
Care of buildings .....	19 45
Repairs on buildings .....	2 80
Repairs on boilers .....	2 66

**SEWAGE PRECIPITATION TANKS.**

Chemicals .....	4,695 05
Labor in sludge disposal .....	2,543 32
Labor on sewage precipitation .....	1,535 64
Electrical power .....	469 50
Miscellaneous supplies .....	402 19
Fuel .....	57 94
Repairs on machinery .....	26 01
Lights .....	17 76
Repairs on buildings .....	12 92

\$28,271 23

The *net* expenditure for construction of sewers to June 30, 1904, inclusive, was..... \$7,567,541 2

The *net* expenditure for maintenance of sewers to June 30, 1904, inclusive, was..... \$1,095,816 1

Bills deposited with the city treasurer  
for collection from April 1 to June 30,  
1904, inclusive, amounted to . . . \$460 87

**As follows :**

Sewer material .....	\$207 33
Filling cisterns, etc. ....	99 60
Cleaning private connections .....	53 25
Miscellaneous work .....	53 16
Old rubber .....	45 13
Testing cement .....	2 40

\$460 87

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of . . . . . \$430 40

As follows:

Sewer material.....	\$200 38
Filling cisterns, etc.....	99 60
Cleaning private connections.....	66 00
Old rubber.....	45 13
Miscellaneous work.....	16 69
Testing cement.....	2 40
	<hr/>
	\$430 40

## HIGHWAYS.

Five permits to open streets were issued during the quarter.

A statement has been prepared of the cost of curbstones set, ascertained by the commissioner and certified to the board of aldermen for approval, as follows:

Morris avenue, from Cypress street to Olney..... \$2,099 21

May 21st, statements of the cost of concreting sidewalks in sundry streets, with ten per centum added to cover the cost of assessing and collecting, were certified to the assessors of taxes, aggregating the sum of \$1,780.95.

June 3d, the proposal of the Providence Coal Company to furnish the New River or Pocahontas coal required during June, 1904, was accepted at the following prices, viz.:

Lump.....	\$3.60 per net ton, at the yard.
Run of mine.....	3.10 " " " " " "

June 7th, the proposal of the Eastern Coal Company to furnish and deliver all the egg and stove size anthracite coal required to July 1, 1905, at \$5.15 per net ton, was accepted.

June 30th, the proposal of the Eastern Coal Company to furnish, at their yard, all the New River coal required during July, 1904, was accepted at the following prices, viz.:

Lump.....	\$3.53	per net ton.
Run of mine.....	3.03	" " "

During the quarter, the following work was completed:

#### SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.

- Nov. 20, 1902, *Egan street, from Manton avenue to the bridge.*
- June 18, 1903, *Wayland avenue, from Lloyd to Irving.*
- " " " *Cole avenue, from Lloyd to Irving.*
- Oct. 15, " *Morris avenue, from Cypress street to Olney.*
- Dec. 17, " *Hilton street, from Willard avenue to Bogman street.*
- April 21, 1904, *Troy street, from Westminster to Oak.*
- " " " *Seventh street, from Summit avenue to North Main street.*

#### TO GRADE AND PUT IN GOOD CONDITION.

Date of order.

- June 18, 1903, *Hastings and Ledge streets.*

The following work was in progress June 30, 1904, - namely:

#### SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.

- June 18, 1903, *Bath street, from Orms to Calverley.*
- " " " *University avenue, from Elmgrove to Slater.*
- April 21, 1904, *Algonquin street, from Crescent to Reservoir avenue.*

The following work, ordered by the board of aldermen and city council, had not commenced June 30, 1904, namely:

#### SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.

Jan. 21, 1904, *Elton street, from Taber avenue to Elmgrove.*

May 19, 1904, *Rosedale street, from Messer to Ellery.*

" " " *Thorne street, from Roanoke to Belmont avenue.*

" " " *Fairview street, from Carleton to Pemberton.*

June 16, 1904, *Barre street, from Ridge to Bell.*

" " " *Bell street, from Barre to Eden.*

#### ABOLISHMENT OF GRADE CROSSINGS.

Date of order.

June 7, 1904, *Building retaining walls, etc., on Barre street.*

Bills approved on account of highways from April 1 to June 30, 1904, inclusive, amounted to: \$77,910 99

#### Classified as follows:

Cleaning streets.....	\$20,209 68
Repairs on unpaved streets .....	10,738 11
Crushed stone—material and labor.....	9,236 03
Repairs on paved streets.....	5,792 69
Stone—paving and crosswalk.....	5,318 08
Barn expenses .....	2,687 20
Blacksmith and wheelwright shop.....	2,624 19
Tools, implements, etc.....	1,205 62
Repairs on stone crushers.....	853 91
Horses, wagons, harnesses, etc.....	738 30
Watering streets.....	722 10
Labor on material.....	663 69
Steam rollers—repairs and supplies.....	533 40
Superintendent's salary .....	442 00
Building driveways, etc.....	411 24
Sundries .....	221 03
Watchman at city yard .....	156 00
Fencing streets—material and labor .....	81 88
Repairs on buildings, highway yard.....	42 60
Office expenses, city yard.....	25 80
Car fares.....	25 00
Telephone lines.....	5 35
Amount carried forward.....	\$62,703 90

Amount brought forward..... \$62,703 90

**NEW WORK — BUILDING AND REBUILD-  
ING STREETS, ETC.**

**SIDEWALKS CURBED AND GUTTERS PAVED.**

<i>Algonquin street, from Crescent to Reservoir avenue</i>	\$394 55	
<i>Bath street, from Orms to Calverley.....</i>	1,325 52	
<i>Cole avenue, from Lloyd to Irving.....</i>	1,270 83	
<i>Hilton street, from Willard avenue to Bogman street</i>	1,249 57	
<i>Morris avenue, from Cypress street to Olney.....</i>	1,918 85	
<i>Seventh street, from Summit avenue to North Main street. ....</i>	2,781 86	
<i>Troy street, from Westminster to Oak.....</i>	1,926 09	
<i>University avenue, from Elmgrove to Slater.....</i>	1,525 26	
<i>Wayland avenue, from Lloyd to Irving. ....</i>	1,570 22	
		13,962 75

**TO GRADE AND PUT IN GOOD CONDITION.**

<i>Hastings and Ledge streets.....</i>	1,244 34
	\$77,910 99

Bills approved for account of building retaining walls, etc., on Barre street from April 1 to June 30, 1904, inclusive, have been paid from the special appropriation for that work, to the amount of . . . \$76 19

Bills deposited with the city treasurer for collection from April 1 to June 30, 1904, inclusive, amounted to . . . \$3,352 83

**As follows :**

Labor and material.....	\$1,861 10
Blacksmith and harness work done for other departments.....	484 31
Building driveways, etc.....	446 87
Street sweepings.....	256 35
Boarding horses for other departments.....	202 55
Manure from barn.....	69 00
Discharging cargoes at city wharf.....	27 75
Empty oil barrels.....	4 90
	\$3,352 83

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$2,383 46

As follows :

Labor and material.....	\$934 68
Blacksmith and harness work done for other departments.....	529 96
Street sweepings.....	312 65
Building driveways, etc.....	282 47
Boarding horses for other departments.....	202 55
Manure from barn.....	69 00
Discharging cargoes at city wharf.....	47 25
Empty oil barrels.....	4 90
	<hr/>
	\$2,383 46

#### SIDEWALKS AND CURBING.

Bills approved on account of sidewalks and curbing from April 1 to June 30, 1904, inclusive, amounted to \$8,591 52

Charged as follows :

Granite curbing.....	\$5,246 77
Concreting sidewalks.....	2,162 64
Repairing sidewalks and gutters.....	1,182 11
	<hr/>
	\$8,591 52

Curbing bills deposited with the city treasurer for collection from April 1 to June 30, 1904, inclusive, amounted to \$13,139 28

During the quarter, coupons from curbing bills have been returned by the city treasurer and receipted for to the amount of \$3,960 47

## CITY ENGINEER.

Bills approved on account of the city engineer's department from April 1 to June 30, 1904, inclusive, amounted to . \$12,084 61

## Charged as follows :

Salary — city engineer.....	\$1,125 00
Salaries of assistants.....	9,733 72
Salaries of clerks.....	789 75
Car fares.....	202 00
Supplies — drawing material, etc.....	196 69
Telephone lines.....	23 30
Carriage hire.....	9 00
Sundries.....	5 15
	<hr/>
	\$12,084 61

Bills deposited with the city treasurer for collection from April 1 to June 30, 1904, inclusive, for one level and tripod sold, amounted to . . . . . \$20 0

During the quarter, coupons from bills collected for one level and tripod sold, have been returned by the city treasurer and receipted for to the amount of . . . . . \$20 0

## BRIDGES.

June 3d, the proposal of the Providence Coal Company furnish and deliver all the New River or Pocahontas lump coal required during June, 1904, at \$4.00 per net ton, was accepted.



June 7th, the proposal of John R. White & Son to furnish and deliver all the egg size anthracite coal required to July 1, 1905, at \$5.75 per net ton, was accepted.

June 30th, the proposal of the Providence Coal Company to furnish and deliver all the New River or Pocahontas lump coal required during July, 1904, at \$4.05 per net ton, was accepted.

During the quarter the following work was completed, namely:

#### TO BUILD BRIDGE AND APPROACHES.

No. of resolution. Date of approval.

220. June 20, 1902, *Over Woonasquatucket river at Egan and Chatlett streets.*

The following work was in progress at the end of the quarter, namely:

No. of resolution. Date of approval.

411. Dec. 19, 1902, *Exchange bridge on its northerly side; bridge over the river between Exchange and Burnside bridges; river walls between Burnside and Exchange bridges.*

The following work, ordered by the city council, had not commenced June 30, 1904:

No. of resolution. Date of approval.

232. June 21, 1904, *Build culvert, across Allens avenue at outlet to Burgess covr, and the approaches thereto.*

Bills approved on account of bridges from  
April 1 to June 30, 1904, inclusive,  
amounted to . . . . . \$4,993 19

## Charged as follows:

Acorn street bridge.....	\$1 00
Atwells avenue bridge.....	33 64
Barn expenses.....	108 27
Branch avenue bridge.....	16 00
Burnside bridge.....	5 36
Cemetery street bridge.....	24 82
Charles street railroad bridge.....	33 98
Crawford street bridge.....	55 62
Delaine street bridge.....	13 70
Exchange bridge.....	20 49
Francis street bridge.....	118 59
Gaspee street bridge.....	9 79
Geneva bridge.....	105 30
Horses, wagons, harnesses, etc.....	12 91
Lumber, hardware, etc.....	331 68
Manton avenue bridge.....	21 76
Merino bridge.....	160 87
Mill street bridge.....	19 62
Nash lane bridge.....	19 24
Park street bridge.....	6 44
Point street bridge.....	709 53
Promenade street bridge.....	25 04
Randall street bridge.....	18 44
Red bridge.....	264 35
Rent of keeper's house — Washington bridge.....	36 00
Salaries — Point street bridge.....	978 25
Salaries — Washington bridge.....	513 50
Salaries — Red bridge.....	514 57
Smith street bridge.....	10 24
Smithfield avenue bridge.....	7 90
Stevens street bridge.....	6 01
Sundries.....	135 13
Telephone lines.....	2 68
Tools.....	77 11
Valley street bridge — north span.....	83 84
Valley street bridge — south span.....	62 70
Veazie street bridge.....	46 10
Wanskuck bridge.....	11 42
Washington bridge.....	108 68
Washington row bridge.....	18 28
West river street bridge.....	41 45
Weybosset bridge.....	178 59
Whelden street bridge.....	4 28

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 \$4,963 19

Bills deposited with the city treasurer for collection from April 1 to June 30, 1904, inclusive, for old lumber sold, amounted to \$2 25

During the quarter, coupons from bills collected for old lumber sold, have been returned by the city treasurer and receipted for to the amount of \$2 25

Bills approved for account of building the Merino bridge, from April 1 to June 30, 1904, inclusive, have been paid from the special appropriation for that work, to the amount of \$5,330 29

Bills approved for account of building the river walls between the Burnside and Exchange bridges, from April 1 to June 30, 1904, inclusive, have been paid from the special appropriation for that work, to the amount of \$14,101 56

### PUBLIC LIGHTS.

Bills approved on account of the public lights from April 1 to June 30, 1904, inclusive, amounted to \$69,756 87

#### Charged as follows :

Arc lights .....	\$31,077 06
Incandescent lights .....	12,097 83
Welsbach lights .....	6,120 80
Salaries .....	395 00
Gas for street lights .....	50 80
Horses, wagons, harnesses, etc.....	12 38
Setting and removing gas posts .....	3 00
	<hr/>
	\$69,756 87

Bills deposited with the city treasurer for collection from April 1 to June 30, 1904, inclusive, amounted to . . . . . \$17 00

As follows :

Lamp posts, lanterns and frames.....	\$15 00
Setting and removing gas posts.....	2 00
	<hr/>
	\$17 00

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$22 00

As follows :

Lamp posts, lanterns and frames.....	\$20 00
Setting and removing gas posts.....	2 00
	<hr/>
	\$22 00

PUBLIC WORKS OFFICE.

Bills approved on account of the public works office from April 1 to June 30, 1904, inclusive, amounted to . . . . . \$5,077 53

Charged as follows :

Salaries of commissioner and secretary.....	\$1,850 00
Salaries of office assistants.....	3,033 66
Office supplies.....	157 90
Telephone lines.....	35 97
	<hr/>
	\$5,077 53

CONTINGENCIES.

Bills approved for the inspection of electric wires from April 1 to June 30, 1904, inclusive, have been paid from the appropriation for contingencies to the amount of . . . . . \$5 00

WALTER F. SLADE,  
*Commissioner.*



1904.]

CITY DOCUMENT.

157649

[No. 19.]

EIGHTY-SEVENTH  
QUARTERLY REPORT

OF THE

★  
Department of Public Works

OF THE

CITY OF PROVIDENCE, R. I.

QUARTER ENDING SEPTEMBER 30, 1904.



*The Providence Press:*

LEON & FARNHAM, CITY PRINTERS,

75 Washington Street,

1904.





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CITY DOCUMENT.

[No. 19.

EIGHTY-SEVENTH  
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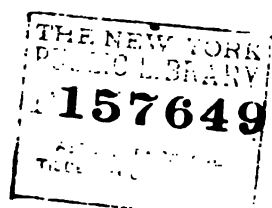
CITY OF PROVIDENCE, R. I.

QUARTER ENDING SEPTEMBER 30, 1904.



The Providence Press:  
SNOW & FARNHAM, CITY PRINTERS,  
63 Washington Street,

1904.



# REPORT.

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OFFICE OF THE DEPARTMENT OF PUBLIC WORKS, }  
CITY HALL, PROVIDENCE, R. I., October 1, 1904. }

TO THE HONORABLE THE CITY COUNCIL:

In compliance with the requirements of Chapter 41 of the ordinances, the Commissioner of Public Works respectfully presents the eighty-seventh quarterly report of the expenditures by the several departments under his direction and control, with statements of work ordered and the condition and cost of same, for the quarter ending September 30, 1904.

## WATER WORKS.

July 18th, the proposal of Fuller Iron Works to furnish and deliver at Pettaconset grate bars and cast iron pipe for the filtration plant for the sum of \$564.25, was accepted.

July 26th, the proposal of the Eastern Coal Company to furnish and deliver at Pettaconset all the New River coal required to July 1, 1905, at \$3.80 per net ton, was accepted.

August 9th, the proposal of Thomas P. Hogan & Company to remove the old building from the Randall estate at Pawtuxet for the material, and also to pay the city the sum of \$10.00, was accepted.

The average daily consumption of water during the last quarter was 13,746,585 gallons.

Water pipes were laid during the quarter as follows :

12-INCH.

In Dorrance and Westminster streets ..... 735.08 feet.

8-INCH.

In Dorrance and Smith streets ..... 13.63 feet.

6-INCH.

In Ashton, Clarence, Conanicut, Elton, Fisher, Gay, Helen, Murray, Payton, Pratt, Seamans, Stanwood and Smith streets; California, Everett, Indiana and Silver Lake avenues; in Berwick Lane, Cato, Clarence, George, Governor and Heather streets; Fletcher, Puritan and Poland avenues in the town of Cranston; in Calef street and Fletcher avenue in the town of Johnston, and in Allendale avenue in the town of North Providence..... 5,962.77 feet.

Total ..... 6,711.48 feet.

or 1.271 + miles.

Water pipes were abandoned or removed during the quarter as follows :

6-INCH.

Removed from Dorrance street ..... 10.58 feet.

or .002 + mile.

Statement of sizes and lengths of pipe laid since the commencement of the work :

36-inch .....	10,084.00 feet.
30-inch .....	61,328.30 feet.
24-inch .....	43,758.29 feet.
20-inch .....	9,626.59 feet.
16-inch .....	33,812.95 feet.
12-inch .....	105,726.32 feet.
10-inch .....	15,057.14 feet.
8-inch .....	292,709.05 feet.
6-inch .....	1,243,271.69 feet.

Total ..... 1,815,374.33 feet.

or, 343.820 + miles.

Statement of sizes and lengths of pipe laid for the special water service for fire protection since the commencement of the work :

24-inch .....	4,188.58 feet.
16-inch .....	23,004.37 feet.
12-inch .....	2,215.76 feet.
Total. ....	29,408.71 feet.

or, 5.569 + miles.

Six fire hydrants have been set during the quarter, one in each of the following locations :

Elton street, north side, 199.5 feet east of east building line of Taber avenue.

Helen street, south side, 522.5 feet east of east building line of Eddy street.

North Main street, east side, 8 feet south of south building line of Woodbine street.

Pleasant street, north side, on west building line of Western street.

Smith street, south side, on range of west line of Elmhurst street.

Tecumseh street, east side, 3 feet north of north building line of Abbott street.

The total number of fire hydrants, exclusive of those for special service for fire protection, is now two thousand and seventeen — nineteen hundred and fourteen flush, and one hundred and three post.

The total number of fire hydrants on the special water service for fire protection is ninety-two.

During the quarter, two hundred and eighty-three water meters were set, of which number fifty-seven were to replace other meters. The use of eight meters was discontinued.

The following meters were in use at the close of the quarter :

KIND.	SIZE.									Total.
	$\frac{3}{4}$ -in.	$\frac{1}{2}$ -in.	1-in.	1 $\frac{1}{2}$ -in.	2-in.	3-in.	4-in.	6-in.	8-in.	
Ball & Fitts.....	2,025	419	99	11	5	.....	.....	.....	.....	2,559
Ball & Fitts, rotary...	.....	.....	4	7	.....	2	1	.....	.....	14
Crown.....	9,487	1,121	331	143	42	25	25	1	.....	11,175
Empire.....	1,062	147	63	45	14	1	1	.....	.....	1,233
Fales, Jenks & Sons..	.....	.....	1	.....	.....	.....	.....	.....	.....	1
Gem.....	.....	.....	.....	.....	13	29	16	3	.....	61
Thomson.....	4,456	424	75	53	22	7	7	2	.....	5,046
Trident.....	102	.....	1	.....	.....	.....	.....	.....	.....	103
Venturi.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1
Worthington.....	1	.....	.....	.....	1	.....	.....	.....	.....	2
	17,133	2,111	574	259	97	64	50	6	.....	120,296

Two plumbers' licenses were issued during the quarter, making the total number one hundred and twenty-eight, all of which expire December 31, 1904.

Six hundred and ninety-two permits to do plumbing work were issued during the quarter.

One hundred and fifty-five applications for water were made during the quarter, making the total number twenty-six thousand five hundred and thirty-six.

The number of new service stops opened during the quarter was one hundred and ninety-three.

The total number of service stops opened to September 30, 1904, inclusive, was twenty-five thousand eight hundred fifty-nine. The number in actual use September 30, 1904, was twenty-three thousand eight hundred and sixty-nine.

The amount of bills approved on account of water works from July 1, to September 30, 1904, inclusive, was:

For maintenance, . . . . . \$38,538 64

Classified as follows:

PETTACONSET PUMPING STATION.

New chimney, to furnish and erect.....	\$5,000 00	
Coal and wood.....	4,584 33	
Sundries.....	916 69	
Engineers.....	760 76	
Firemen.....	623 90	
Superintendence.....	398 39	
Oil, waste and packing.....	130 88	
Care of grounds.....	124 60	
Labor on fuel.....	120 25	
Repairs on boilers.....	85 65	
Worthington high-duty engine.....	82 21	
Corliss pumping engine and house.....	59 54	
Allis Chalmers high-duty engine, to furnish and erect.....	55 55	
Cornish engine house.....	49 40	
Barn expenses.....	49 11	
Lights.....	3 44	
Cornish pumping engine.....	3 00	
		\$13,047 70

SOCKANOSSET RESERVOIR.

Sundries.....	\$198 86	
Watchman.....	194 00	
		392 86

HOPE PUMPING STATION.

Coal and wood.....	\$1,392 52	
Firemen.....	480 35	
Engineers.....	336 98	
Sundries.....	51 43	
Lights.....	39 90	
Repairs on boilers.....	4 71	
Holly pumping engine.....	3 25	
		2,309 14

HOPE RESERVOIR.

Sundries.....	\$242 15	
Watchman.....	218 25	
		460 40

Amount carried forward.....		\$16,210 10
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Amount brought forward.....		\$16,210 1
<b>FRUIT HILL RESERVOIR.</b>		
Sundries.....	\$694 18	
Watchman.....	218 25	
		912 4
<b>METER DEPARTMENT.</b>		
Water meters.....	\$3,431 43	
Setting and repairing meters.....	2,050 62	
		5,482 05
<b>PIPE LINE AND SERVICE STOPS.</b>		
Repairs.....	\$4,165 43	
Superintendence — salaries.....	904 42	
Inspection of pipe line and services.....	896 57	
		5,966 42
<b>PIPE YARD.</b>		
Laying water pipe.....	\$3,548 17	
Laying service pipe.....	1,447 58	
Service pipe.....	521 92	
Special castings.....	455 33	
Pig lead and tin.....	274 54	
Labor on and carting pipe.....	177 30	
Tools.....	133 89	
Pipe yard, office expenses.....	37 35	
Repairs on pipe yard buildings.....	18 47	
Stop valves.....	13 51	
Taps and stops.....	75	
		6,628 8
<b>MISCELLANEOUS.</b>		
Clerks' and inspectors' salaries.....	\$1,646 21	
Barn expenses.....	679 22	
Prevention of defilement of the Pawtuxet.....	549 99	
Horses, wagons, harnesses, etc.....	194 55	
Telephone lines.....	122 68	
Car fares.....	100 00	
Real estate in Lincoln.....	27 50	
Real estate at Pawtuxet.....	12 00	
Sundries.....	3 50	
Public drinking fountains and troughs.....	3 18	
		3,338
		\$38,538
For construction, . . . . .		\$10,813 4



REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 9

Charged as follows :

Installation of sand filtration plant at Pettaconset. \$10,813 41

The total expenditures to September 30,  
1904, inclusive, was . . . . . \$9,760,564 71

The *net* expenditure for maintenance from July 1 to  
September 30, 1904, inclusive, was..... \$29,302 59

The *net* expenditure for maintenance to September 30, 1904,  
inclusive, was..... \$2,100,361 37

The *net* expenditure for construction from July 1, 1902, to  
September 30, 1904, inclusive, was..... \$133,478 96

The value of the water works system,  
January 1, 1904, as estimated by the city  
engineer, was as follows :

Pettaconset pumping station.....	\$340,694 00	
Hope pumping station .....	126,530 12	
Sockanosset, Hope and Fruit Hill reservoirs.....	706,531 26	
Main lines and distribution pipes.....	2,703,862 95	
Real estate in Pawtuxet and Lincoln .....	15,975 00	
Tools and supplies.....	44,989 96	
		<u>\$3,938,533 29</u>

Bills deposited with the city treasurer  
for collection from July 1 to September 30,  
1904, inclusive, amounted to . . . . . \$84,038 99

As follows :

Water.....	\$74,971 20	
Water meters.....	3,931 75	
Setting and repairing meters.....	3,169 21	
Labor and material, laying services, etc., .....	1,658 03	
Rent of real estate .....	100 50	
Repairs on pipe line .....	97 30	
Penalties.....	74 00	
Permanently closing service stops.....	25 00	
For material in old building at Pawtuxet.....	10 00	
Blue prints of water distribution.....	2 00	
		<u>\$84,038 99</u>

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of **\$83,451 :**

As follows :

Water.....	\$74,141 13	
Water meters.....	3,881 75	
Setting and repairing meters.....	3,501 72	
Labor and material, laying services, etc.....	1,621 90	
Repairs on pipe line.....	115 68	
Rent of real estate.....	88 00	
Penalties.....	74 00	
Permanently closing service stops.....	25 00	
Blue prints of water distribution.....	2 00	
		<b>\$83,451 1</b>

The amount of bills approved on account of water works for the fiscal year ending September 30, 1904, inclusive, was :

For maintenance, . . . . . **\$172,312 00**

Classified as follows :

**PETTACONSET PUMPING STATION.**

Coal and wood.....	\$20,871 82	
New chimney, to furnish and erect.....	5,000 00	
Sundries.....	3,103 64	
Engineers.....	2,778 06	
Firemen .....	2,328 40	
Superintendence.....	1,503 21	
Labor on fuel.....	549 28	
Care of grounds.....	512 16	
Barn expenses.....	459 49	
Oil, waste and packing.....	393 68	
Repairs on boilers.....	387 71	
Worthington high-duty engine.....	248 59	
Allis Chalmers high-duty engine, to furnish and erect.....	205 55	
Real estate. ....	152 88	
Corliss pumping engine and house.....	113 33	
Cornish engine house.....	80 49	
Lights .....	32 78	
Cornish pumping engine.....	3 00	
		<b>\$38,724</b>
Amount carried forward.....		<b>\$38,724</b>

# REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 11

Amount brought forward ..... \$38,724 07

## SOCKANOSSET RESERVOIR.

Watchman.....	\$732 00	
Sundries.....	511 25	
		1,243 25

## HOPE PUMPING STATION.

Coal and wood.....	\$2,749 05	
Firemen.....	1,793 22	
Engineers.....	1,220 84	
Repairs on boilers.....	492 79	
Sundries.....	275 07	
Lights.....	241 24	
Oil, waste and packing.....	43 44	
Holly pumping engine.....	7 68	
		6,863 33

## HOPE RESERVOIR.

Watchman .....	\$823 50	
Sundries.....	750 39	
		1,573 89

## FRUIT HILL RESERVOIR.

Sundries.....	\$2,596 89	
Watchman .....	823 50	
		3,422 39

## METER DEPARTMENT.

Water meters.....	\$12,259 38	
Setting and repairing meters .....	6,808 10	
		19,067 48

## PIPE LINE AND SERVICE STOPS.

Repairs .....	\$16,221 13	
Superintendence—salaries .....	3,413 14	
Inspection of pipe line and services.....	2,987 11	
		22,621 38

## PIPE YARD.

Laying water pipe.....	\$16,228 32	
Cast iron water pipe .....	14,629 38	
Special castings.....	6,024 52	
Laying service pipe.....	4,627 42	
Stop valves .....	3,393 31	
Amounts carried forward.....	\$44,902 95	\$93,515 79

Amounts brought forward.....	\$44,902 95	\$93,515 79
Fire hydrants, boxes and covers.....	3,227 70	
Service pipe.....	1,632 72	
Taps and stops.....	1,297 76	
Pig lead and tin.....	1,026 63	
Tools.....	933 40	
Labor on and carting pipe.....	610 11	
Pipe yard, office expenses.....	182 57	
Repairs on pipe yard buildings.....	23 58	
		53,837 42

## MISCELLANEOUS.

Town of Cranston, tax.....	\$7,077 69	
Clerks' and inspectors' salaries.....	6,211 52	
Thawing out water pipe.....	4,218 62	
Barn expenses.....	2,523 98	
Prevention of defilement of the Pawtuxet.....	2,199 96	
Horses, wagons, harness, etc.....	993 05	
Telephone lines.....	506 22	
Town of North Providence, tax.....	400 00	
Car fares.....	315 00	
Inspection of water pipe with reference to electro- lysis.....	182 13	
Sundries.....	147 74	
Real estate at Pawtuxet.....	79 50	
Transferring water service records to card system.....	41 05	
Public drinking fountains and troughs.....	34 83	
Real estate in Lincoln.....	27 50	
		24,968 79
		\$172,312 00

For construction, . . . . . \$72,675 10

Charged as follows:

Installation of sand filtration plant at Pettaconset, \$72,675 10

## SEWERS.

During the quarter ending September 30, 1904, three hundred and thirty-seven permits were issued to drain-layers—two hundred and one for new work and one hundred and thirty-six for extensions and repairs of drains.

Four drain-layers' licenses were issued during the quarter, making the total number one hundred and forty-six, all of which expire December 31, 1904.

July 26th, the proposal of the Eastern Coal Company to furnish and deliver all the New River coal required at the Ernest street station to July 1, 1905, for the sum of \$3.55 per net ton, and to furnish all New River coal required by other branches of the sewer department for the same period, for the sum of \$3.15 per net ton for run of mine, and \$3.65 per net ton for lump, at their yard, was accepted.

July 29th, an assessment for the cost of constructing a sewer in Hamilton, Irving and Melrose streets was certified to the city treasurer amounting to \$50.00.

August 2d, the proposal of James C. Goff to furnish and deliver at the city yard, one cargo of Sanford bricks at \$8.50 per thousand was accepted.

September 9th, the proposal of J. Spencer Turner Company to furnish and deliver 10,000 yards of filter cloth at 20½ cents per yard, was accepted.

September 22d, contracts for the construction of the following sewers were awarded and subsequently executed, namely:

[The amounts given below are what are estimated will be paid the contractors for labor, and do not include the cost of inspection and materials or rock excavation.]

#### TO CHARLES CRANKSHAW.

No. of resolution. Date of approval.

302.	Sept. 18, 1904,	<i>Nebraska street, from</i>	
		<i>near Rugby to Eddy,</i>	\$338 30
300.	" " "	<i>Everett avenue, from</i>	
		<i>Arlington to Elmgrove,</i>	1,044 60

## TIMOTHY F. LYONS.

No. of resolution. Date of approval.

301. Sept. 13, 1904, *Eighth street, from near  
Summit avenue to North  
Main street, . . .* \$2,561 50

During the quarter, the construction of the following  
sewers was completed, namely:

No. of resolution. Date of approval.

Date of completion.

319. Sept. 18, 1903, *Elton street, from a  
point 100 feet east of  
Taber avenue to Elm-  
grove, . . .* July 25, 1904.
320. " " " *Vandewater street, from  
Douglas avenue to  
Branch, . . .* Aug. 6, 1904.
322. " " " *Dudley street, from Pearl  
and Plain to the head of  
the city dock, . . .* Aug. 4, 1904.
56. Feb. 2, 1904, *Ninth and Pettis streets,* Aug. 24, 1904.
203. June 7, 1904, *Tanner, Laban, and  
Conanicut streets, . . .* Sept. 13, 1904.

Work upon the following sewers was in progress at the  
close of the quarter, namely:

No. of resolution. Date of approval.

58. Feb. 2, 1904, *Thayer, Manning and Brook streets,  
(storm sewer).*
60. " " " *Alverson, Eastwood, Laurel Hill and  
Hartford avenues.*
201. June 7, 1904, *Barre street, from Grove to about 1,300  
feet northerly; also westerly through  
right of way across tracks of N. Y.,  
N. H. and H. R. R. Company to Harris  
avenue.*

No. of resolution. Date of approval.

202. June 7, 1904, *Veazir street, from Douglas avenue to Branch.*  
 219. June 17, 1904, *Exchange place, from Exchange street to the river.*  
 302. Sept. 13, 1904, *Nebraska street, from near Rugby to Eddy.*

Work upon the following sewers, completing the work ordered by the city council, had not commenced September 30, 1904, namely:

No. of resolution. Date of approval.

53. Feb. 2, 1904, *Admiral street, from Hillwood to end of present sewer in Admiral.*  
 300. Sept. 13, 1904, *Everett avenue, from Arlington to Elmgrove.*  
 301. " " " *Eighth street, from a point 50 feet west of Summit avenue to North Main street.*

The amount of bills approved on account of sewers from July 1 to September 30, 1904, inclusive, was as follows:

FOR CONSTRUCTION.

Regular appropriation.....	\$28,880 55	
Improved sewerage appropriation. ....	1,337 00	
		\$30,217 55

Charged as follows:

Material.....	\$3,337 45
Contract reservations.....	1,319 00
Additional catch-basins.....	1,184 67
Sundries.....	875 12
Testing cement.....	279 50
Tools.....	4 00
Sewer in Algonquin street, from Crescent to Holmes	5 25
Sewer in Alverson, Eastwood, Laurel Hill and Hartford avenues .....	2,154 34
Sewer in Barre street, from Grove to about 1,300 feet northerly; also westerly through right of way across tracks of N. Y., N. H. and H. R. R. Company to Harris avenue .....	1,961 56
Amount carried forward.....	\$11,120 89

Amount brought forward.....	\$11,120 89
Sewer in Chalkstone avenue from Lisbon street to River avenue.....	5 25
Sewer in Dudley street, from junction of Pearl and Plain to Eddy street, and across land of the city from Eddy street to the head of the city dock.....	4,323 50
Sewer in Elton street, from a low point 100 feet east of Taber avenue to Elmgrove.....	639 70
Sewer in Exchange place, from Exchange street to the river .....	1,346 45
Sewer in Fairview and Pemberton streets.....	84 00
Sewer in Nebraska street, from Rugby to Eddy....	5 47
Sewer in Ninth and Pettis streets.....	1,311 10
Sewer in Reservoir avenue, west side, from Crescent street to Algonquin.....	7 50
Sewer in Rosedale street, from Messer to Ellery...	5 35
Sewer in Tanner, Laban and Conanicut streets....	1,077 74
Sewer in Thayer, Manning and Brook streets.....	7,504 48
Sewer in Vandewater street, from Douglas avenue to Branch.....	2,409 14
Sewer in Veazie street, from near Douglas avenue to Branch.....	336 48
Sewer in Washington avenue, from Virginia to Eddy street .....	7 50
Sewer in West Park and Bath streets.....	15 00
Sewer in Seekonk Division, Section 30.....	18 00
	<u>\$30,217 55</u>

For maintenance, . . . . . \$31,967 00

Classified as follows:

Cleaning basins and sewers.....	\$7,823 56
Repairing basins and sewers.....	4,109 12
Cleaning and repairing old drains.....	1,155 74
Inspection of connections.....	728 36
Sundries.....	691 26
Tools.....	575 14
Salary, superintendent.....	471 14
Barn expenses.....	453 91
Horses, wagons, harnesses, etc.....	204 08
Cleaning private connections.....	61 60
Telephone lines.....	35 93
Office expenses.....	17 45
Repairs on gate house.....	10 14
Car fares.....	10 00
Filling cisterns, etc.....	2 00
Amount carried forward.....	<u>\$16,349 43</u>



# REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 17

Amount brought forward..... \$16,349 43

## ERNEST STREET STATION.

Coal and wood .....	\$992 15
Repairs on engines.....	969 97
Engineers.....	877 32
Cleaning screens.....	707 36
Firemen.....	431 50
Cleaning and repairing pumps.....	402 56
Care of grounds.....	132 20
Supplies.....	112 06
Repairs on buildings.....	37 82
Lights.....	30 01
Care of buildings.....	15 31
Repairs on boilers.....	1 83

## SEWAGE PRECIPITATION TANKS.

Chemicals .....	5,939 13
Labor in sludge disposal.....	2,643 11
Labor on sewage precipitation.....	1,723 57
Electrical power.....	472 25
Fuel.....	310 29
Miscellaneous supplies.....	176 92
Repairs on machinery.....	166 85
Lights.....	17 16
Care of grounds.....	4 20
	<hr/>
	\$31,967 00

The *net* expenditure for construction of sewers to September 30, 1904, inclusive, was..... \$7,597,075 14

The *net* expenditure for maintenance of sewers to September 30, 1904, inclusive, was..... \$1,127,275 82

Bills deposited with the city treasurer  
for collection from July 1 to September 30,  
1904, inclusive, amounted to . . . \$1,295 26

As follows :

Miscellaneous work.....	\$379 58
Cleaning private connections .....	62 25
Pumping out cellars, etc.....	54 45
Sewer material.....	683 80
Relaying railroad track in the city yard.....	75 03
Laying drains to curbstones.....	40 15
	<hr/>
	\$1,295 26

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of . . . . . \$1,191 14

As follows :

Miscellaneous work.....	\$391 35
Cleaning private connections.....	55 25
Pumping out cellars.....	20 59
Sewer material.....	683 80
Laying drains to curbstone.....	40 15
	<hr/>
	\$1,191 14

The amount of bills approved on account of sewers for the fiscal year ending September 30, 1904, inclusive, was as follows :

FOR CONSTRUCTION.

Regular appropriation.....	\$126,491 09	
Improved sewerage appropriation.....	32,563 83	
	<hr/>	\$159,054 92

Charged as follows :

Material.....	\$32,189 33
Contract reservations.....	13,893 43
Sundries.....	3,076 35
Additional catch-basins.....	2,233 30
Testing cement.....	954 37
Tools.....	32 45
Sewer in Algonquin street, from Crescent to Holmes	794 57
Sewer in Alverson, Eastwood, Laurel Hill and	
Hartford avenues.....	4,018 97
Sewer in Atwells avenue, Pine and Broad streets..	4,789 45
Sewer in Barnes street, from low point in said street	
to Thayer .....	53 08
Sewer in Barre street, from Grove to about 1,300	
feet northerly, also westerly through right of	
way across tracks of N. Y., N. H. and H. R. R.	
Company to Harris avenue.....	1,961 56
Sewer in Branch avenue, from Douglas to Veazie	
street.....	3,243 13
	<hr/>
Amount carried forward.....	\$67,241 99

# REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 19

Amount brought forward.....	\$67,241 99
Sewer in Branch avenue, from near Langdon street to near the Moshassuck river.....	3,559 14
Sewer in Chalkstone avenue, from Lisbon street to River avenue.....	819 66
Sewer in Charles street, from near Amboy to Branch avenue.....	12 00
Sewer in Dudley street, from junction of Pearl and Plain to Eddy, and across land of the city from Eddy street to the head of the city dock.....	21,972 40
Sewer in Elton street, from a low point 100 feet east of Taber avenue to Elmgrove .....	639 70
Sewer in Exchange place, from Exchange street to the river.....	1,346 45
Sewer in Fairview and Pemberton streets.....	1,136 69
Sewer in Hilton street, from Bogman to Willard avenue, and in California avenue, from Virginia to Eddy street.....	1,997 16
Sewer in Merino avenue, from Manton to near Merino bridge.....	5,359 62
Sewer in Nebraska street, from Rugby to Eddy....	5 47
Sewer in Ninth and Pettis streets.....	1,531 71
Sewer in North Main street, east side, from Stanton avenue to Third street.....	3,616 63
Sewer in Reservoir avenue, west side, from Crescent street to Algonquin.....	867 07
Sewer in Rosedale street, from Messer to Ellery...	857 58
Sewer in Silver Spring street and Northup avenue.	10
Sewer in Tanner, Laban and Conanicut streets....	1,106 29
Sewer in Thayer, Manning and Brook streets .....	9,057 31
Sewer in Vandewater street, from Douglas avenue to Branch.....	6,399 05
Sewer in Veazie street, from near Douglas avenue to Branch.....	336 48
Sewer in Washington avenue, from Virginia to Eddy street.....	1,385 22
Sewer in Wayland, Cole and University avenues..	3,714 58
Sewer in West Park and Bath streets.....	3,562 13
Sewer in Weymouth street and Lloyd avenue.....	2,979 51
Sewer in Branch avenue, from Veazie street to the river near Vandewater street.....	4 50
Sewer in Moshassuck Division, Section 27.....	2,523 36
Sewer in Moshassuck Division, Section 28.....	1,060 79
Sewer in Seekonk Division, Section 29.....	3 25
Sewer in Seekonk Division, Section 30.....	15,959 08
	<hr/>
	\$ 159,054 92

For Maintenance, . . . . . \$118,713 31

Classified as follows:

Cleaning basins and sewers.....	\$27,098 25
Repairing basins and sewers.....	14,413 11
Cleaning and repairing old drains.....	4,091 50
Inspection of connections.....	2,702 06
Tools.....	2,649 30
Barn expenses.....	1,396 20
Salary, superintendent.....	1,777 71
Sundries .....	1,529 37
Horses, wagons, harnesses, etc.....	1,034 40
Use of water.....	900 00
Cleaning private connections.....	197 60
Office expenses.....	192 75
Telephone lines.....	137 89
Filling cisterns, etc.....	66 72
Car fares.....	60 00
Repairs on buildings, sewer maintenance yard....	47 45
Repairs on gate house.....	24 95

ERNEST STREET STATION.

Coal and wood.....	5,357 19
Engineers .....	3,275 98
Cleaning screens.....	2,553 39
Firemen.....	1,709 37
Cleaning and repairing pumps.....	1,543 95
Repairs on engines.....	1,051 80
Supplies.....	480 87
Care of grounds.....	370 85
Lights.....	120 35
Repairs on boilers.....	56 26
Care of buildings.....	49 64
Repairs on buildings.....	47 12

SEWAGE PRECIPITATION TANKS.

Chemicals.....	21,335 14
Labor in sludge disposal.....	9,922 47
Labor on sewage precipitation.....	6,252 79
Miscellaneous supplies.....	2,151 46
Electrical power.....	1,912 00
Fuel.....	910 71
Repairs on machinery .....	547 66
Lights.....	112 20
Repairs on buildings.....	93 60
Repairs on sewage precipitation tanks.....	33 03
Care of grounds.....	4 20
	<hr/>
	\$118,713 31

## HIGHWAYS.

Four permits to open streets were issued during the quarter.

July 26th, the proposal of the Eastern Coal Company to furnish at their yard all the New River or Pocahontas coal required to July 1st, 1905, was accepted at the following prices: New River—run of mine \$3.15, lump \$3.65; Pocahontas—run of mine \$3.30, lump \$3.80, per net ton.

July 28th, the proposal of Frank A. Gammino to furnish and deliver material in Adelaide avenue, west of the railroad bridge, for the sum of 44 cents per cubic yard, was accepted.

August 4th, the proposal of the Connecticut Trap Rock Quarries to furnish and deliver in the city yard 2,000 tons of trap rock at \$1.20 per ton, was accepted and the order subsequently increased to 4,000 tons.

August 5th, a schedule of curbing bills remaining unpaid was certified to the assessors of taxes for collection.

During the quarter, the following work was completed :

### SIDEWALKS CURBED AND GUTTERS PAVED.

**Date of order.**

- |                |   |
|----------------|---|
| June 18, 1903, | <i>Bath street, from Orms to Calverley.</i>                 |
| “ “ “          | <i>University avenue, from Elmgrove to Slater.</i>          |
| Jan. 21, 1904, | <i>Elton street, from Taber avenue to Elmgrove.</i>         |
| April “ “      | <i>Algonquin street, from Crescent to Reservoir avenue.</i> |
| May 19, “      | <i>Rosedale street, from Messer to Ellery.</i>              |
| “ “ “          | <i>Thorne street, from Roanoke to Belmont avenue.</i>       |
| “ “ “          | <i>Fairview street, from Carleton to Pemberton.</i>         |

The following work, ordered by the board of aldermen and city council, had not commenced September 30, 1904, namely:

#### SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.

June 16, 1904, *Barre street, from Ridge to Bell.*

" " " *Bell street, from Barre to Eden.*

Sept. 15, " *Nebraska street, from Eddy to Rugby.*

Bills approved on account of highways from July 1 to September 30, 1904, inclusive, amount to . . . . . \$112,198 95

Classified as follows:

Repairs on unpaved streets.....	\$30,597 25	
Cleaning streets.....	20,686 53	
Crushed stone — material and labor.....	17,633 59	
Stone — paving and crosswalk.....	8,360 63	
Repairs on paved streets.....	8,275 06	
Blacksmith and wheelwright shop.....	2,895 70	
Barn expenses .....	2,830 46	
Tools, implements, etc.....	1,528 84	
Labor on material.....	1,341 41	
Watering streets.....	1,279 08	
Steam rollers — repairs and supplies.....	737 88	
Repairs on stone crushers.....	602 01	
Superintendent's salary.....	471 14	
Building driveways, etc.....	419 94	
Horses, wagons, harnesses, etc.....	191 15	
Watchman at city yard.....	166 29	
Sundries.....	150 01	
Office expenses, city yard.....	62 16	
Car fares.....	25 00	
Telephone lines.....	5 35	
Repairs on buildings, highway yard.....	1 00	
Fencing streets — material and labor.....	70	
		\$98,261 11

#### NEW WORK — BUILDING AND REBUILDING STREETS, ETC.

##### SIDEWALKS CURBED AND GUTTERS PAVED.

<i>Algonquin street, from Crescent to Reservoir avenue</i>	\$3,633 79	
<i>Bath street, from Orms to Calvary.....</i>	2,984 39	
<i>Elton street, from Taber avenue to Elmgrove.....</i>	1,234 35	
Amounts carried forward.....	\$7,872 53	\$98,261 11

# REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 23

Amounts brought forward.....	\$7,872 53	\$98,261 18
<i>Fairview street</i> , from Carleton to Pemberton.....	1,454 92	
<i>Rosedale street</i> , from Messer to Ellery.....	1,615 57	
<i>Seventh street</i> , from Summit avenue to North Main street.....	568 31	
<i>Thorne street</i> , from Roanoke to Belmont avenue...	605 24	
<i>Troy street</i> , from Westminster to Oak.....	153 76	
<i>University avenue</i> , from Elmgrove to Slater.....	1,667 44	
		13,937 77
		\$112,198 95

Bills deposited with the city treasurer for collection from July 1 to September 30, 1904, inclusive, amounted to . . . \$4,026 95

## As follows:

Labor and material.....	\$3,066 92
Building driveways, etc.....	354 51
Boarding horses for other departments.....	216 22
Street sweepings.....	167 50
Blacksmith and harness work for other departments.....	87 90
Manure from barn.....	69 00
Use of steam rollers.....	60 00
Empty oil barrels.....	4 90
	\$4,026 95

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$3,984 28

## As follows:

Labor and material.....	\$2,694 74
Blacksmith and harness work for other departments.....	471 59
Building driveways, etc.....	410 33
Boarding horses for other departments.....	216 22
Street sweepings.....	117 50
Manure from barn.....	69 00
Empty oil barrels.....	4 90
	\$3,984 28

Bills approved on account of highways  
for the fiscal year ending September 30,  
1904, inclusive, amounted to:

Regular appropriation.....	\$325,770 78	
Special appropriation.....	870 19	
		<u>\$326,640 97</u>

Classified as follows:

Cleaning streets.....	\$57,973 87	
Repairs on unpaved streets.....	56,675 81	
Crushed stone—material and labor.....	51,012 55	
Removing snow and ice.....	21,135 62	
Repairs on paved streets.....	19,401 91	
Stone—paving and crosswalk.....	16,038 95	
Barn expenses.....	11,488 06	
Blacksmith and wheelwright shop.....	10 200 36	
Repairs on stone crushers.....	4,833 52	
Steam rollers—repairs and supplies.....	4,163 74	
Tools, implements, etc.....	4,072 86	
Labor on material.....	3,346 17	
Watering streets.....	2,243 64	
Repairs on buildings, highway yard.....	1,996 52	
Horses, wagons, harnesses, etc.....	1,868 25	
Superintendent's salary.....	1,777 71	
Building driveways, etc.....	1,234 79	
Watchman at city yard.....	627 43	
Sundries.....	564 17	
Office expenses, city yard.....	238 10	
Fencing streets—material and labor.....	137 92	
Car fares.....	80 00	
Telephone lines.....	21 40	
		<u>\$271,130 34</u>

NEW WORK — BUILDING AND REBUILD-  
ING STREETS, ETC.

SIDEWALKS CURBED AND GUTTERS PAVED.

<i>Algonquin street</i> , from Crescent to Reservoir avenue	\$4,048 34	
<i>Bath street</i> , from Orms to Calverley.....	4,309 91	
<i>Cole avenue</i> , from Lloyd to Irving.....	1,270 83	
<i>Croyland road</i> , from Oxford street to Sayles.....	883 50	
<i>Douglas avenue</i> , from Chad Brown street to Ad- miral.....	870 19	
<i>Elton street</i> , from Taber avenue to Elmgrove.....	1,234 33	
		<u>\$12,617 12</u>
Amounts carried forward.....	\$12,617 12	<u>\$271,130 34</u>



# REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 25

Amounts brought forward.....	\$12,617 12	\$271,130 35
<i>Fairview street</i> , from Carleton to Pemberton.....	1,454 92	
<i>Hilton street</i> , from Willard avenue to Bogman street	1,249 57	
<i>Morris avenue</i> , from Cypress street to Olney.....	6,589 10	
<i>Promenade street</i> , north side, from Leland to Cal- verly.....	980 74	
<i>Regent avenue</i> , from Harold street to River avenue.	1,667 91	
<i>Rosedale street</i> , from Messer to Ellery.....	1,615 57	
<i>Sayles street</i> , from Gordon avenue to Prairie.....	1,126 85	
<i>Seventh street</i> , from Summit avenue to North Main street. ....	3,350 17	
<i>Silver Spring street</i> , from Ashton to Northup ave- nue.....	706 98	
<i>Thorne street</i> , from Roanoke to Belmont avenue...	605 24	
<i>Troy street</i> , from Westminster to Oak.....	2,079 85	
<i>University avenue</i> , from Elmgrove to Slater.....	3,192 70	
<i>Wayland avenue</i> , from Lloyd to Irving. ....	1,570 22	
		38,806 94
PAVE WITH GRANITE BLOCKS, ASPHALT, OR BITUMINOUS MACADAM.		
<i>Branch avenue</i> , from Veazie street to bridge near Vandewater street.....		11,394 50
TO GRADE AND PUT IN GOOD CONDITION.		
<i>Hastings and Ledge streets</i> .....		5,309 18
		\$326,640 97

## SIDEWALKS AND CURBING.

Bills approved on account of sidewalks  
and curbing from July 1 to September 30,  
1904, inclusive, amounted to . . . \$9,910 75

Charged as follows :

Granite curbing.....	\$6,199 38
Repairing sidewalks and gutters.....	2,874 07
Concreting sidewalks.....	837 30
	\$9,910 75

Curbing bills deposited with the city  
treasurer for collection from July 1 to  
September 30, 1904, inclusive, amounted to \$911 85

During the quarter, coupons from curbing bills have been returned by the city treasurer and receipted for to the amount of . . . \$1,412 67

Bills approved on account of sidewalks and curbing for the fiscal year ending September 30, 1904, inclusive, amounted to . . . \$23,451 73

Charged as follows :

Granite curbing.....	\$15,113 42
Repairing sidewalks and gutters.....	4,295 91
Concreting sidewalks.....	4,042 40
	<hr/>
	\$23,451 73

### CITY ENGINEER.

Bills approved on account of the city engineer's department from July 1 to September 30, 1904, inclusive, amounted to \$13,330 59

Charged as follows :

Salary — city engineer.....	\$1,125 00
Salaries of assistants.....	10,564 55
Salaries of clerks.....	842 42
Car fares.....	403 85
Supplies — drawing material, etc.....	367 33
Telephone lines.....	23 49
Meteorological instruments and repairs.....	1 50
Sundries.....	1 45
Instruments and repairs.....	1 00
	<hr/>
	\$13,330 59

Bills approved for account of city engineer's department, for the fiscal year ending September 30, 1904, inclusive, amounted to . . . . . \$48,780 57

## Charged as follows :

Salary—city engineer.....	\$4,500 00
Salaries of assistants.....	39,025 54
Salaries of clerks.....	3,176 95
Car fares.....	1,011 75
Supplies, drawing material, etc.....	936 95
Telephone lines.....	72 34
Instruments and repairs.....	27 09
Carriage hire.....	13 13
Meteorological instruments and repairs.....	8 77
Sundries .....	8 05
	<hr/>
	\$48,780 57

## BRIDGES.

July 15th, the proposal of Charles Crankshaw to furnish the labor and material for extending the westerly abutment of the Adelaide avenue bridge, was accepted.

July 18th, the proposal of Charles Crankshaw to build a culvert across Allens avenue at Burgess cove, was accepted and a contract subsequently executed. Amount \$1,395.70.

July 26th, the proposal of the Eastern Coal Company to furnish and deliver all the New River or Pocahontas coal required to July 1, 1905, at \$4.00 and \$4.15 per net ton, respectively, was accepted.

August 23rd, the proposal of Edward W. Everson to build brick arches and level up with concrete the floors of the post office bridge, was accepted and a contract subsequently executed. Amount \$5,255.00.

September 1st, the proposal of James A. Potter & Company for furnishing and delivering 225,000 feet of southern pine plank on the city wharf at \$23.00 per thousand, was accepted.

The following work, ordered by the city council, was in progress at the end of the quarter, namely :

No. of resolution. Date of approval.

411. Dec. 19, 1902, *Exchange bridge on its northerly side; bridge over the river between Exchange and Burnside bridges; river walls between Burnside and Exchange bridges.*
232. June 21, 1904, *Build culvert across Allens avenue at outlet to Burgess cove, and the approaches thereto.*

Bills approved on account of bridges from July 1 to September 30, 1904, inclusive,

amounted to . . . . . \$6,973 05

Charged as follows:

Acorn street bridge.....	\$6 10
Adelaide avenue bridge, extension of abutments..	745 42
Barn expenses.....	113 52
Building at city yard.....	26
Culvert across Allens avenue at Burgess cove—to build....	1,719 16
Crawford street bridge.....	4 20
Eagle street bridge.....	62 29
Gaspee street bridge.....	16 89
Geneva bridge.....	1 10
Horses, wagons, harnesses, etc.....	45 96
Lumber, hardware, etc.....	96 08
Manton avenue bridge.....	25 33
Point street bridge.....	230 67
Red bridge.....	722 73
Rent of keeper's house—Washington bridge.....	36 00
Repairs on city wharf.....	12 72
Salaries—Point street bridge.....	1,074 75
Salaries—Red bridge.....	621 61
Salaries—Washington bridge.....	621 06
Smith street bridge.....	38 21
Sundries.....	79 63
Telephone lines.....	2 68
Tools.....	92 48
Veazie street bridge.....	33 45
Wanskuck bridge.....	28 64
Washington bridge.....	171 32
Weybosset bridge.....	370 79
	<hr/>
	\$6,973 05

Bills deposited with the city treasurer  
for collection from July 1 to September 30,  
1904, inclusive, amounted to . . . \$91 73

As follows :

Work for The Rhode Island Company on Red bridge.....	\$90 73
Old lumber.....	1 00
	<hr/> \$91 73

During the quarter, coupons from bills  
collected have been returned by the city  
treasurer and receipted for to the amount of \$91 73

As follows :

Work for The Rhode Island Company on Red Bridge.....	\$90 73
Old lumber.....	1 00
	<hr/> \$91 73

Bills approved on account of bridges for  
the fiscal year ending September 30, 1904,  
inclusive, amounted to . . . \$20,852 45

Charged as follows :

Acorn street bridge.....	\$13 00
Adelaide avenue bridge, extension of abutments..	745 42
Atwells avenue bridge.....	33 64
Barn expenses.....	474 41
Branch avenue bridge.....	16 00
Branch avenue culvert.....	19 61
Building at city yard.....	5 84
Burnside bridge.....	12 18
Car fares.....	25 15
Cemetery street bridge.....	29 33
Charles street railroad bridge.....	33 98
Crawford street bridge.....	316 83
Culvert across Allens avenue at Burgess cove—to build.....	1,719 16
Delaine street bridge.....	13 70
Eagle street bridge.....	71 84
Amount carried forward.....	<hr/> \$3,530 09

Amount brought forward.....	\$3,530 09
Exchange bridge.....	29 84
Francis street bridge.....	129 71
Gaspee street bridge.....	28 68
Geneva bridge.....	106 40
Hawkins street bridge.....	8 55
Horses, wagons, harnesses, etc.....	93 16
Lumber, hardware, etc.....	652 20
Manton bridge.....	60
Manton avenue bridge.....	292 10
Merino bridge.....	163 15
Mill street bridge.....	19 62
Nash lane bridge.....	19 24
Park street bridge.....	6 44
Point street bridge.....	2,540 67
Promenade street bridge.....	68 78
Randall street bridge.....	21 24
Red bridge.....	1,496 10
Rent of keeper's house—Washington bridge.....	144 00
Repairs on city wharf.....	12 72
Salaries—Point street bridge.....	3,984 50
Salaries—Red bridge.....	2,170 86
Salaries—Washington bridge.....	2,168 10
Smith street bridge.....	48 45
Smithfield avenue bridge.....	7 90
Stevens street bridge.....	6 01
Sundries.....	777 50
Telephone lines.....	10 72
Tools.....	431 61
Valley street bridge — north span.....	83 84
Valley street bridge — south span.....	62 70
Veazie street bridge.....	79 55
Wanskuck bridge.....	40 06
Washington bridge.....	932 01
Washington row bridge.....	18 28
West river street bridge.....	46 35
Weybosset bridge.....	618 44
Whelden street bridge.....	4 28
	<hr/>
	\$20,852 45

Bills approved for account of building the Merino bridge, from July 1 to September 30, 1904, inclusive, have been paid from the special appropriation for that work, to the amount of

\$545 6-

Bills approved for account of building the Merino bridge for the fiscal year ending September 30, 1904, inclusive, amounted to \$12,701 08

Bills approved for account of building the river walls between the Burnside and Exchange bridges, from July 1 to September 30, 1904, inclusive, have been paid from the special appropriation for that work, to the amount of \$7,480 16

Bills approved for account of building the river walls between the Burnside and Exchange bridges, for the fiscal year ending September 30, 1904, inclusive, amounted to \$35,940 82

### PUBLIC LIGHTS.

Bills approved on account of the public lights from July 1 to September 30, 1904, inclusive, amounted to \$70,722 76

#### Charged as follows:

Arc lights .....	\$51,797 90
Incandescent lights .....	12,532 76
Welsbach lights .....	6,166 84
Salaries .....	207 86
Gas for street lights .....	17 40
	<hr/>
	\$70,722 76

Bills deposited with the city treasurer for collection (for removing gas posts), from July 1 to September 30, 1904, inclusive, amounted to \$5 00

During the quarter, coupons from bills collected (for removing gas posts), have been returned by the city treasurer and receipted for to the amount of . . . \$5 00

Bills approved on account of the public lights for the fiscal year ending September 30, 1904, inclusive, amounted to . . . \$279,846 72

Charged as follows:

Arc lights.....	\$205,553 98
Incandescent lights.....	48,286 17
Welsbach lights.....	24,155 74
Salaries ..	1,484 29
Gas for street lights.....	206 14
Setting and removing gas posts.....	114 42
Barn expenses.....	27 50
Horses, wagons, harnesses, etc.....	13 48
Car fares.....	5 00
	<hr/>
	\$279,846 72

PUBLIC WORKS OFFICE.

Bills approved on account of the public works office from July 1 to September 30, 1904, inclusive, amounted to . . . \$5,280 44 -

Charged as follows:

Salaries of commissioner and secretary.....	\$1,850 00
Salaries of office assistants.....	3,180 62
Office supplies.....	231 53
Telephone lines.....	18 29
	<hr/>
	\$5,280 44

Bills approved on account of the public works office for the fiscal year ending September 30, 1904, inclusive, amounted to . . . \$20,820 80



## Charged as follows:

Salaries of commissioner and secretary.....	\$7,400 00
Salaries of office assistants.....	12,399 44
Office supplies.....	830 26
Telephone lines.....	188 10
Carriage hire.....	3 00
	<hr/>
	\$20,820 80

## CONTINGENCIES.

Bills approved for the inspection of electric wires for the fiscal year ending September 30, 1904, inclusive, have been paid from the appropriation for contingencies to the amount of . . . . . \$16 50

## ABOLISHING GRADE CROSSING AT GROVE STREET, ETC.

July 21st, the proposal of Frederick E. Shaw for grading and constructing retaining walls on Barre street, was accepted and a contract subsequently executed. Amount of contract \$35,406.10.

August 11th, the proposal of Earl D. F. Titus to furnish labor and material for raising the house of Peter F. Carr, in connection with the work of building Barre street, for the sum of \$490.00, was accepted.

August 11th, the proposal of Elizabeth J. Lalime to furnish labor and material for raising the house of Thomas F. West on Barre street, for the sum of \$414.00, was accepted.

The proposal of Frank A. Gammino to build a sewer in Bell and Eiswald streets, was accepted. The estimated amount of the work was \$287.40.

August 29th, the proposal of Frank A. Gammino to furnish labor and material for raising the houses of George N.

Whitford and Timothy O'Riley on Barre street, for the sum of \$320.00 and \$510.00, respectively, was accepted.

September 8th, the proposal of Frank A. Gammino to furnish labor and material for raising the house of Mary Dunlavey on Barre street, for the sum of \$355.00, was accepted.

The following work, ordered by the Board of Aldermen, was in progress September 30, 1904:

Date of order.

June 7, 1904, *Building retaining walls, etc., on Barre street.*

Bills approved for account of building retaining walls. etc., on Barre street, from July 1 to September 30, 1904, inclusive, have been paid from the special appropriation for that work, to the amount of . . . **\$3,874 18**

Bills approved for account of building retaining walls etc., on Barre street for the fiscal year ending September 30, 1904, inclusive, amounted to . . . . . **\$3,950 37**

WALTER F. SLADE,

*Commissioner.*

161245

1905.]

CITY DOCUMENT,

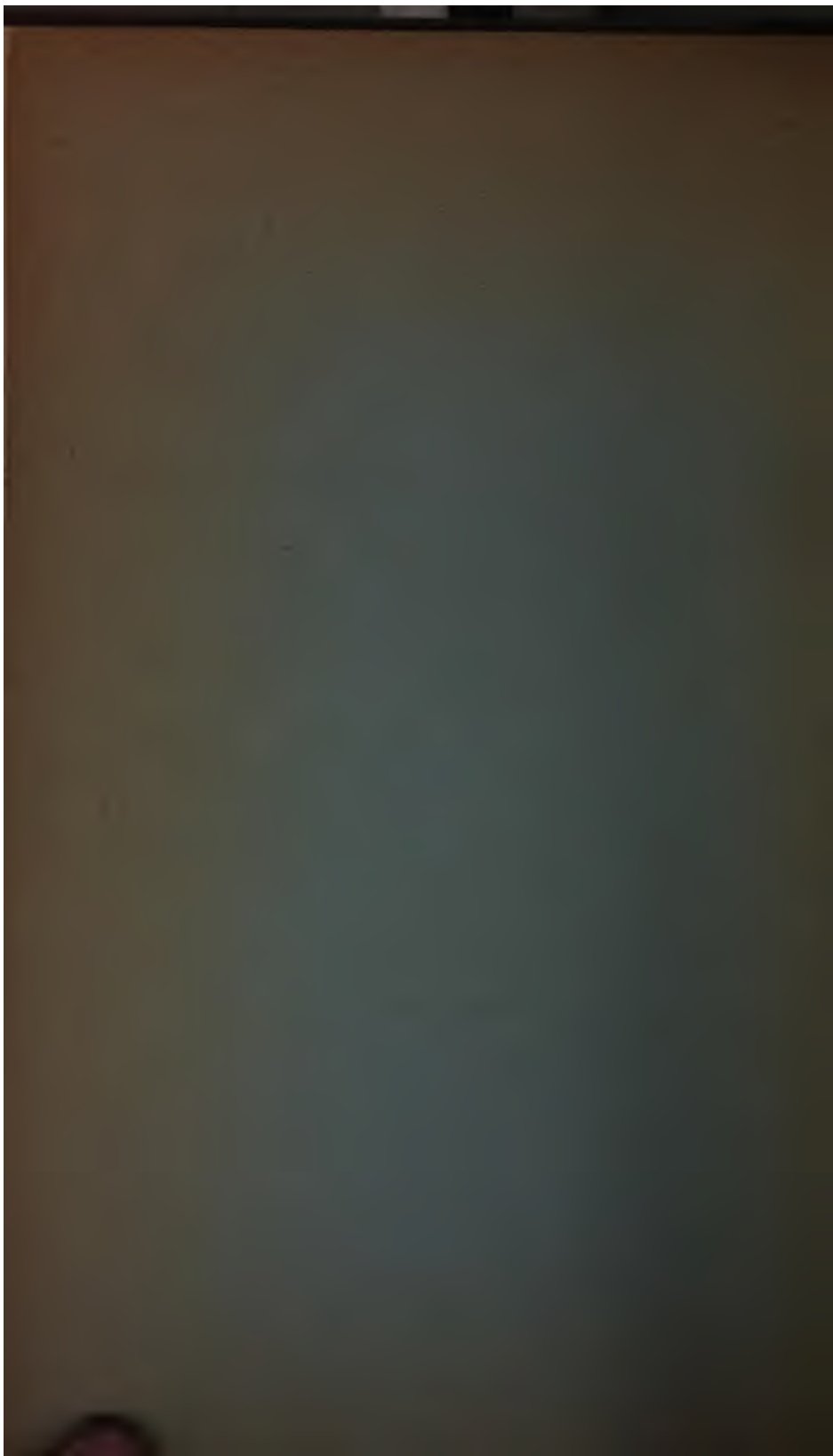
[No. 4.]

EIGHTY-EIGHTH  
QUARTERLY REPORT  
OF THE  
Department of Public Works  
OF THE  
CITY OF PROVIDENCE, R. I.

QUARTER ENDING DECEMBER 31, 1904.



The Providence Press:  
SNOW & FARNHAM, CITY PRINTERS,  
101 Washington Street.  
1905.



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CITY DOCUMENT.

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EIGHTY-EIGHTH  
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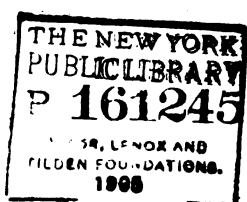


The Providence Press:

SNOW & FARNHAM, CITY PRINTERS,

63 Washington Street.

1905.



# REPORT:

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OFFICE OF THE DEPARTMENT OF PUBLIC WORKS, }  
CITY HALL, PROVIDENCE, R. I., January 2, 1905. }

TO THE HONORABLE THE CITY COUNCIL:

In compliance with the requirements of Chapter 41 of the ordinances, the Commissioner of Public Works respectfully presents the eighty-eighth quarterly report of the expenditures by the several departments under his direction and control, with statements of work ordered and the condition and cost of same, for the quarter ending December 31, 1904.

## WATER WORKS.

October 31st, the proposal of the Consolidated Engine-Stop Company to furnish and install for the Corliss engine at Pettaconset, one Monarch engine-stop, one Monarch speed-limit and the necessary circuit-closers, vacuum-breaker, battery-test board, etc., for the sum of \$325.00, was accepted.

December 1st, the proposal of the Warren Foundry and Machine Company to furnish and deliver at the city yard 1,788 tons of cast iron water pipe at \$27.20 per gross ton, was accepted and a contract subsequently executed. Amount, \$48,633.60.

December 6th, the following proposals for pig lead, lead pipe, pig tin, and taps and stops, were accepted and contracts subsequently executed, viz. :

The L. H. Tillinghast Supply Company, for 15,000 pounds pig lead at 5 cents per pound. Amount, \$750.00.

Phillips Lead and Supply Company, for 11,000 pounds lead pipe at \$5.00 per hundred weight. Amount, \$616 00.

The Congdon & Carpenter Company, for 11,500 pounds lead pipe at \$5.00 per hundred weight, and for 300 pounds pig tin at \$30.75 per hundred weight. Total amount, \$736.25.

John W. Lyon, for taps and stops, various sizes. Amount, \$1,267.20.

December 29th, the proposal of Coffin Valve Company to furnish 6 36-inch flanged water gates for Pettaconset pumping station for \$3,175.00, was accepted.

December 30th, the proposal of Coffin Valve Company to furnish fire hydrants and water gates, was accepted and a contract subsequently executed. Amount, \$8,902.00.

The average daily consumption of water during the last quarter was 14,679,006 gallons, and the average daily consumption for the year 1904 was 13,857,087 gallons.

Water pipes were laid during the quarter as follows:

24-INCH.	
In Exchange place.....	452.69 <del>feet</del>
12-INCH.	
In Crary street: Allens and Mt. Pleasant avenues.....	349.57 <del>feet</del>
8-INCH.	
In Exchange place and Crary street: in Narragansett boulevard and Pontiac avenue in the town of Cranston.....	718.16 <del>feet</del>
6-INCH.	
In Exchange place, Moultrie court, Althea, Barre, Bissell, Fifth, Fisher, Grove, Hart, Jewell, Laban, Meadow, Nelson, Plymouth, Reeder, Smith, Temple streets: Eastwood, Massie, Mechanics, Reynolds and Whitney avenues: in Chiswick road, Carlton, Richard and Transit streets: Bay View, Reservoir and Sylvan avenues in the town of Cranston.....	6,860.51 feet
Total.....	8,380.93 feet
or 1.587 + miles.	



Water pipes were abandoned or removed during the quarter as follows :

<b>24-INCH.</b>	
From Exchange place.....	372.37 feet.
<b>8-INCH.</b>	
From Exchange place.....	36.25 feet.
<b>6-INCH.</b>	
From Exchange place and Middle street.....	101.67 feet.
Total.....	510.29 feet.

or .096 + mile.

Statement of sizes and lengths of pipe laid since the commencement of the work :

36-inch .....	10,084.00 feet.
30-inch .....	61,328.30 feet.
24-inch .....	43,838.61 feet.
20-inch .....	9,626.59 feet.
16-inch .....	33,812.95 feet.
12-inch .....	106,075.89 feet.
10-inch .....	15,057.14 feet.
8-inch .....	293,390.96 feet.
6-inch .....	1,250,030.53 feet.
Total.....	1,823,244.97 feet.

or, 345.311 + miles.

Water pipes were laid during the quarter for the special water service for fire protection as follows :

<b>24-INCH.</b>	
In Exchange place.....	401.54 feet.

or, .076 + mile.

Water pipes were removed from the special water service for fire protection as follows :

<b>24-inch.</b>	
From Exchange place.....	292.66 feet.

or, .055 + mile.

Statement of sizes and lengths of pipe laid for the special water service for fire protection since the commencement of the work :

24-inch .....	4,297.46 feet.
16-inch .....	23,004.37 feet.
12-inch .....	2,215.76 feet.
Total. ....	29,517.59 feet.

or, 5.59 + miles.

Thirteen fire hydrants have been set during the quarter, one in each of the following locations :

Allens avenue, east side, 59 feet south of Blackstone street.  
 Allens avenue, east side, 17.5 feet south of Crary street.  
 Barton street, east side, 11.5 feet south of Moultrie court.  
 Barre street, east side, 720 feet north of Grove street.  
 Bluff avenue, Cranston, north side, 315 feet west of Narragansett boulevard.  
 Crary street, north side, 518 feet east of Allens avenue.  
 Chiswick road, Cranston, north side, 506 feet east of Broad street.  
 Evergreen street, north side, 350 feet west of Camp street.  
 Hillwood avenue, Cranston, north side, 259 feet east of Webster avenue.  
 Laban street, north side, 3 feet west of Ralph street.  
 Laban street, north side, 501 feet west of Laurel Hill avenue.  
 Rhodes street, south side, 8 feet west of Allens avenue.  
 Whitney street, north side, 161.5 feet east of Hope street.

The total number of fire hydrants, exclusive of those for special service for fire protection, is now two thousand and thirty — nineteen hundred and twenty-four flush, and one hundred and six post.

The total number of fire hydrants on the special water service for fire protection is ninety-two.

During the quarter, two hundred and forty-six water meters were set, of which number forty-four were to replace other meters. The use of eight meters was discontinued.

The following meters were in use at the close of the quarter :

KIND.	SIZE.									Total.
	$\frac{1}{8}$ -in.	$\frac{1}{4}$ -in.	1-in.	1 $\frac{1}{2}$ -in.	2-in.	3-in.	4-in.	6-in.	8-in.	
Ball & Fitts.....	1,986	412	98	11	4	.....	.....	.....	.....	2,511
Ball & Fitts, rotary...	.....	.....	4	7	.....	2	1	.....	.....	14
Crown.....	9,537	1,137	336	143	44	27	25	1	.....	11,250
Empire.....	1,119	153	65	45	14	1	1	.....	.....	1,388
Fales, Jenks & Sons...	.....	.....	1	.....	.....	.....	.....	.....	.....	1
Gem.....	.....	.....	.....	.....	13	29	17	3	.....	62
Thomson.....	4,556	424	75	54	22	7	7	2	.....	5,147
Trident.....	102	.....	1	.....	.....	.....	.....	.....	.....	103
Venturi.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1
Worthington.....	1	.....	.....	.....	1	.....	.....	.....	.....	2
	17,301	2,126	580	260	98	66	51	6	1	20,489

Seven hundred and twenty-nine permits to do plumbing work were issued during the quarter.

One hundred and seventy-nine applications for water were made during the quarter, making the total number twenty-six thousand seven hundred and fifteen.

The number of new service stops opened during the quarter was one hundred and seventy-five.

The total number of service stops opened to December 31, 1904, inclusive, was twenty-six thousand and thirty-four. The number in actual use December 31, 1904, was twenty-three thousand eight hundred and eighty-one.

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The following is a list of sprinkler hydrants for car sprinklers, namely :

- Angell street, south side, 90 feet east of Wayland avenue, in sidewalk.
- Branch avenue, south side, 316 feet west of Woodward road, in sidewalk.
- Camp street, east side, 125 feet north of Olney, in sidewalk.
- Chalkstone avenue, northeast corner of Fallon, in sidewalk.
- Dexter street, west side, 18 feet south of Cranston, in sidewalk.
- Eddy street, west side, at Richmond, in street.
- Eddy street, west side, 5 feet south of north line of Washington avenue, in street.
- Edna street, west side, 16 feet north of south line of car-house.
- Elmwood avenue, east side, 85 feet south of Thackeray street.
- Hope street, east side, 125 feet north of Barnes, in street.
- Manton avenue, west side, 150 feet south of fire station, in sidewalk.
- Market square, north side, 24 feet east of Canal street, in street.
- North Main street, west side, 182 feet north of White, in street.
- North Main street, west side, 17 feet north of Livingstone, in street.
- Orms street, south side, 23 feet east of Windsor, in sidewalk.
- Randall square, east side, 32 feet north of Randall street, in street.
- Richmond street, southwest side, 44 feet southeast of Pine, in sidewalk.
- Smith street, southwest side, 360 feet southeast of Hilltop avenue, in sidewalk.
- Thurbers avenue, south side, 208 feet east of Broad street, in sidewalk.
- Wickenden street, south side, 167 feet west of Brook, in street.
- Winter street, east side, 187 feet south of Pond, in sidewalk.

The following table shows the lengths, sizes, etc., of services laid during twenty-eight years, ending December 31, 1904:

YEARS.	LENGTH OF SERVICES IN FEET.										TAPS USED.						STOPS USED.						Service Boxes Used.
	SIZES OF PIPE.						Totals.	Trenching.	Paving.	$\frac{3}{8}$ in.	$\frac{1}{2}$ in.	$\frac{5}{8}$ in.	$\frac{3}{4}$ in.	$\frac{1}{2}$ in.	$\frac{3}{4}$ in.	$\frac{1}{2}$ in.	$\frac{3}{4}$ in.	$\frac{1}{2}$ in.	To- tal.				
	$\frac{1}{8}$ in.	$\frac{1}{4}$ in.	$\frac{3}{8}$ in.	1 in.	$1\frac{1}{2}$ in.	$1\frac{3}{4}$ in.																	
To Dec. 31, 1903.....	9,919.9	239,334.88	22,448.29	4,957.0	3,638.2	457.7	280,355.97	294,883.79	35,955.28		612	14,384	1,704	426	346	17,472	645	15,368	1,414	306	293	17,966	18,475
1904.....	.....	8,405.2	480.3	64.8	195.8	.....	9,146.1	9,623.5	1,155.5		....	512	32	12	10	566	....	546	28	4	9	587	600
Totals....	9,919.9	247,740.08	22,928.59	5,021.8	3,834.0	457.7	289,502.07	304,507.29	37,110.78		612	14,896	1,736	438	356	18,038	645	15,854	1,442	310	302	18,553	19,075

The following table shows the lengths, sizes, etc., of services laid during the year ending December 31, 1904:

MONTHS.	LENGTH OF SERVICES IN FEET.										NUMBER AND SIZE OF TAPS USED.										NUMBER AND SIZE OF STOPS USED.										Service Boxes Used.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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Changes in size and location of services in 1904 :

TAPS AND STOPS.										SIZES AND LENGTHS OF LEAD PIPE.										Trenching.	Paving.	Change in size only.	Change in location only.	Change in both size and location.	Change in length.
TAKEN OUT.					INSERTED.					TAKEN OUT.					INSERTED.										
1 inch.	$\frac{1}{2}$ inch.	$\frac{3}{4}$ inch.	1 inch.	1 inch.	$\frac{1}{2}$ inch.	$\frac{3}{4}$ inch.	1 inch.	1 inch.	1 inch.	$\frac{1}{2}$ inch.	$\frac{3}{4}$ inch.	1 inch.	1 inch.	1 inch.	$\frac{1}{2}$ inch.	$\frac{3}{4}$ inch.	1 inch.	1 inch.	1 inch.						
43	37	6	8	2	.....	48	14	7	5	685.3	575.1	64.3	114.1	34.4	.....	729.7	242.4	94.4	92.6	.....	1,867.5	854.5	52.9	5	6

28 services have been removed.  
During the year 154 taps were reported obstructed and were dug up and examined, 149 were cleaned, 5 were found unobstructed.  
18 private taps were inserted.  
8 services have been relaid.

The following table exhibits the number of service stops opened each month from the commencement to December 31, 1904:

MONTHS.	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904
January.....	54	33	21	34	55	15	49	9	20	17	15	21	17	18	26	7	39	36	39	56	40	29	30	27	30	40	18	34	15	27	26	19		
February.....	47	18	7	25	23	18	9	19	3	11	9	10	7	15	7	10	21	25	26	23	24	28	8	28	24	21	7	15	10	18	26	12		
March.....	38	34	63	7	45	32	60	19	46	23	39	11	28	9	34	16	14	19	28	24	28	30	40	27	20	42	46	28	30	24	39	35	12	
April.....	109	109	108	32	108	82	78	52	58	55	49	55	62	48	68	60	38	61	53	73	76	71	76	67	100	70	53	69	47	73	73	60	58	
May.....	224	306	147	162	168	136	95	80	84	66	72	78	62	62	61	70	52	74	66	114	83	91	81	79	98	82	51	73	60	67	52	70	70	
June.....	329	295	151	172	148	114	103	71	109	82	48	64	81	81	59	59	86	59	80	83	103	106	105	100	76	86	61	73	60	96	71	58	67	
July.....	333	261	127	141	158	83	86	49	75	56	77	66	76	77	83	62	89	74	67	85	105	93	80	89	83	59	51	66	44	81	74	59	80	
August.....	224	269	123	83	94	91	51	51	39	58	87	69	61	57	71	49	52	56	76	95	104	115	116	83	64	69	54	80	66	78	62	57	52	
September.....	184	147	139	101	94	80	63	44	37	60	67	93	50	70	29	74	63	64	77	93	114	88	112	70	71	67	83	53	76	72	56	72	61	
October.....	138	135	100	92	84	81	78	70	48	61	56	47	65	62	62	80	70	64	54	104	102	96	85	90	70	62	47	54	65	66	43	58	66	
November.....	100	104	185	86	54	73	57	63	54	37	44	49	51	39	57	69	47	28	72	81	118	80	70	68	62	54	62	45	54	63	55	48	58	
December.....	86	83	45	122	60	35	55	45	47	29	40	27	56	44	46	28	49	42	23	50	83	102	62	62	57	58	53	47	40	56	44	46	43	51
Totals.....	56	1463	1596	1364	977	1008	805	777	573	618	548	614	612	611	575	505	612	570	642	684	909	1014	902	884	708	747	628	560	606	597	1002	616	612	612



The receipts for water each year since the commencement have been as follows :

Year.	Amount.	Year.	Amount.
1872.....	\$41,003 51	1889.....	\$377,497 97
1873.....	97,386 09	1890.....	401,140 86
1874.....	132,052 39	1891.....	404,553 84
1875.....	165,144 71	1892.....	409,421 21
1876.....	183,868 73	1893.....	427,546 51
1877.....	200,039 39	1894.....	432,383 97
1878.....	218,883 33	1895.....	471,069 97
1879.....	229,551 78	1896.....	485,187 33
1880.....	247,705 06	1897.....	490,652 47
1881.....	260,530 87	1898.....	502,803 10
1882.....	269,318 77	1899.....	522,124 46
1883.....	283,632 89	1900.....	554,949 62
1884.....	302,368 36	1901.....	578,869 07
1885.....	313,561 21	1902.....	605,307 35
1886.....	323,084 67	1903.....	621,016 74
1887.....	339,513 00	1904.....	670,700 90
1888.....	346,731 58		

The amount of bills approved on account of water works from October 1 to December 31, 1904, inclusive, was :

For maintenance, . . . . . \$71,124 52

Classified as follows :

**PETTACONSET PUMPING STATION.**

Allis Chalmers high-duty engine, to furnish and erect.....	\$19,243 26
Coal and wood.....	4,898 81
Sundries.....	1,871 90
Worthington high-duty engine.....	1,413 30
Corliss pumping engine and house.....	895 80
Firemen .....	650 00
Amount carried forward.....	\$29,173 07

Amount brought forward.....	\$29,173 07	
Engineers.....	800 71	
New chimney, to furnish and erect.....	390 66	
Superintendence.....	377 86	
Oil, waste and packing.....	214 22	
Repairs on boilers.....	135 30	
Lights.....	126 06	
Labor on fuel.....	105 60	
Barn expenses.....	57 12	
Cornish engine house.....	56 96	
Care of grounds.....	52 65	
Cornish pumping engine.....	16 65	
Installation of sand filtration plant at Pettaconset..	3,333 66	
		<u>\$35,040 32</u>

## SOCKANOSSET RESERVOIR.

Sundries.....	\$189 85	
Watchman.....	184 00	
		<u>373 85</u>

## HOPE PUMPING STATION.

Firemen.....	\$406 90	
Engineers.....	302 29	
Holly pumping engine.....	119 50	
Coal and wood.....	79 70	
Sundries.....	61 15	
Lights.....	50 90	
Repairs on boilers.....	1 93	
		<u>1,022 37</u>

## HOPE RESERVOIR.

Watchman.....	\$207 00	
Sundries.....	183 58	
		<u>390 58</u>

## FRUIT HILL RESERVOIR.

Sundries.....	\$506 21	
Watchman.....	207 00	
		<u>713 21</u>

## METER DEPARTMENT.

Water meters.....	\$3,947 84	
Setting and repairing meters.....	1,644 68	
		<u>5,592 52</u>
Amount carried forward.....		<u>\$43,133</u>

# REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 15

Amount brought forward..... \$43,133 05

## PIPE LINE AND SERVICE STOPS.

Repairs .....	\$4,219 95	
Superintendence — salaries .....	877 83	
Inspection of pipe line and services.....	723 76	
		5,821 54

## PIPE YARD.

Laying water pipe.....	\$6,341 12	
Service pipe.....	1,648 87	
Laying service pipe.....	1,322 58	
Pig lead and tin.....	891 10	
Taps and stops.....	344 86	
Tools.....	291 63	
Special castings.....	249 02	
Labor on and carting pipe.....	195 30	
Pipe yard, office expenses.....	126 34	
Cast iron water pipe...	17 35	
Repairs on pipe yard buildings.....	17 06	
Fire hydrants, boxes and covers.....	16 90	
		11,462 13

## MISCELLANEOUS.

Town of Cranston, tax.....	\$7,063 94	
Clerks' and inspectors' salaries.....	1,561 39	
Barn expenses.....	738 39	
Prevention of defilement of the Pawtuxet.....	519 99	
Town of North Providence, tax.....	400 00	
Horses, wagons, harnesses, etc.....	125 39	
Telephone lines.....	122 68	
Car fares .....	100 00	
Thawing out water pipe.....	13 42	
Public drinking fountains and troughs.....	12 60	
		10,707 80
		\$71,124 52

For construction, . . . . . \$33,322 61

Charged as follows:

Installation of sand filtration plant at Pettaconset, \$33,322 61

The total expenditures to December 31,  
1904, inclusive, was . . . . . \$9,865,011 84

The *net* expenditure for maintenance from October 1 to December 31, 1904, inclusive, was..... \$62,151 63

The *net* expenditure for maintenance to December 31, 1904, inclusive, was..... \$2,162,513 00

The *net* expenditure for construction from July 1, 1902, to December 31, 1904, inclusive, was..... \$168,801 57

The value of the water works system, January 1, 1904, as estimated by the city engineer, was as follows:

Pettaconset pumping station.....	\$340,694 00
Hope pumping station .....	126,530 12
Sockanosset, Hope and Fruit Hill reservoirs.....	706,531 26
Main lines and distribution pipes.....	2,703,862 95
Real estate in Pawtuxet and Lincoln .....	15,975 00
Tools and supplies.....	44,939 96
	<hr/>
	\$3,938,533 29

Bills deposited with the city treasurer for collection from October 1 to December 31, 1904, inclusive, amounted to . . \$81,663 67

As follows:

Water.....	\$73,208 85
Water meters.....	3,896 00
Setting and repairing meters.....	2,002 95
Labor and material, laying services, etc.....	1,720 33
Sale of old metal.....	649 09
Penalties.....	82 00
Rent of real estate.....	61 25
Permanently closing service stops.....	30 00
Repairs on pipe line.....	11 20
Blue prints of water distribution.....	2 00
	<hr/>
	\$81,663 67

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$88,698 ✓

As follows:

Water.....	\$79,643 77	
Water meters.....	3,845 00	
Setting and repairing meters.....	2,751 64	
Labor and material, laying services, etc., .....	1,814 37	
Sale of old metals.....	347 72	
Rent of real estate.....	115 50	
Penalties.....	82 00	
Repairs on pipe line.....	66 66	
Permanently closing service stops.....	30 00	
Blue prints of water distribution.....	2 00	
		\$88,698 66

## SEWERS.

During the quarter ending December 31, 1904, two hundred and seventy permits were issued to drain-layers — one hundred and forty-three for new work and one hundred and twenty-seven for extensions and repairs of drains.

October 11th, contracts for the construction of the following sewers were awarded and subsequently executed, namely :

[ The amounts given below are what are estimated will be paid the contractors for labor, and do not include the cost of inspection and materials.]

## TO FREDERICK E. SHAW.

No. of resolution. Date of approval.

330. Oct. 7, 1904, *Douglas avenue, from  
Farmer street to Vandewater, . . . . .* \$1,965 20

## TO CHARLES CRANKSHAW.

331. Oct. 7, 1904, *Reservoir avenue, from  
Elmwood to Adelaide, and  
in Adelaide avenue, from  
Reservoir westerly across  
land of New York, New  
Haven and Hartford Rail-  
road Co. to main trunk  
sewer, . . . . .* \$955 50

October 13th, the proposals of the Charles S. Bush Company and Starkweather & Williams Company to furnish prime green copperas during the year 1905 at forty-nine cents per hundred pounds, f. o. b. Harbor Junction wharf, were each accepted for one-half the quantity required.

October 19th, the proposal of James C. Goff to furnish and deliver on the city wharf one cargo of Sanford bricks at \$10.00 per thousand, was accepted.

October 26th, the proposal of Frank A. Gammino to lay a drain in Livingstone street, from Mechanic avenue to Printery street, at \$1.20 per linear foot, was accepted.

October 31st, the proposal of B. L. Ames to equip the four boilers at Ernest street station with the patent simplex smoke preventers for the sum of \$500.00, was accepted.

November 30th, the proposal of the New England Steam Brick Company to furnish and deliver in the city yard 150,000 Barrington bricks at \$10.15 per thousand, was accepted.

December 19th, the proposal of Charles M. Kelly to furnish and deliver along the line of the work the Portland cement required during 1905, was accepted and a contract subsequently executed.

December 19th, the proposal of the H. R. Horton Company to furnish and deliver along the line of the work the natural cement required during 1905, was accepted and a contract subsequently executed.

December 23d, the proposal of Edwin D. Allen to furnish sewer pipe was accepted and a contract subsequently executed. Amount, \$6,087.15.

December 23d, the proposal of the Smithfield Granite

Company to furnish and deliver one hundred catch-basin inlet stones at \$4.80 each, was accepted.

December 23d, the proposal of The Warner-Miller Company to furnish and deliver in the city yard, one hundred and thirty catch-basin flagstones at \$5.25 each, was accepted and a contract subsequently executed.

## SEWERS CONSTRUCTED TO DECEMBER 31, 1904, IN MILES.

ITEMS.	KIND.	Built previous to 1904.	Built during 1904.	Total to Dec. 31, 1904.
Under regular appropriation.....	Brick.	38.312	.964	39.296
Under regular appropriation.....	Pipe.	129.589	3.175	132.764
Under improved sewerage appropriation.....	Brick and Pipe.	28.376	.012	28.388
Total miles of sewers....		196.277	4.171	200.448

During the year, 105 catch-basins, 93 extra inlets, and 239 manholes have been built, making a total in use December 31, 1904, of 4,701 catch-basins, 1,595 extra inlets, and 8,632 manholes.

During the quarter, the construction of the following sewers was completed, namely:

No. of resolution.	Date of approval.	Date of completion.
58.	Feb. 2, 1904, <i>Thayer, Manning and Brook streets, (storm sewer),</i>	Nov. 9, 1904.
202.	June 7, " <i>Veazie street, from near Douglas avenue to Branch,</i>	Oct. 26, 1904.

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No. of resolution.	Date of approval.		Date of completion.
219.	June 17, 1904,	<i>Exchange place, from Exchange street to the river, . . . .</i>	Oct. 29, 1904.
300.	Sept. 13,	<i>“ Everett avenue, from Arlington to Elmgrove, .</i>	Nov. 7, 1904.
301.	“ “ “	<i>“ Eighth street, from a point 50 feet west of Summit avenue to North Main street, . . . .</i>	Dec. 31, 1904.
302.	“ “ “	<i>“ Nebraska street, from near Rugby to Eddy, .</i>	Oct. 11, 1904.

Work upon the following sewers was in progress at the close of the quarter, namely :

No. of resolution.	Date of approval.	
60.	Feb. 2, 1904,	<i>Alverson, Eastwood, Laurel Hill and Hartford avenues.</i>
201.	June 7, 1904,	<i>Barre street, from Grove to about 1,300 feet northerly ; also westerly through right of way across tracks of N. Y., N. H. &amp; H. R. R. Company to Harris avenue.</i>

Work upon the following sewers, completing the work ordered by the city council, had not commenced December 31, 1904, namely :

No. of resolution.	Date of approval.	
53.	Feb. 2, 1904,	<i>Admiral street, from Hillwood to end of present sewer in Admiral.</i>
330.	Oct. 7,	<i>“ Douglas avenue, from Farmer street to Vandewater.</i>
331.	“ “ “	<i>Reservoir avenue, from Elmwood to Adelaide, and in Adelaide avenue, from Reservoir westerly across land of the N. Y., N. H. &amp; H. R. R. Company to main trunk sewer.</i>



**SEWER MAINTENANCE DEPARTMENT.**  
The following table shows the work performed by the department cleaning sewers, basins and drains,  
for the year 1904:

MONTHS.	OLD WORK.						NEW WORK.						Total deposit re- moved, cubic yards.			
	OLD DRAINS.		SAND- CATCHERS.		OPEN DITCHES.		SUMPS.		SEWERS.		CATVIL-BASINS.					
	Number.	Length in feet.	Deposit removed, cu. yards.	Number.	Deposit removed, cu. yards.	Length in feet.	Deposit removed, cu. yards.	Dead Ends.	No. times examined.	Number cleaned.	Deposit removed, cu. yards.					
January.....							2	6.70	10							16.18
February.....							7	105.22	10							115.29
March.....				1	180	13.88	5	73.34	65	11,500	122.41			706	1,244.60	1,453.63
April.....	7	850	62.75				4	123.00	66	10,975	63.74	4		2	1,166	1,592.05
May.....							9	69.45	55	8,975	58.15			1	1,414	1,904.18
June.....				8	26.75		2	72.23	66	10,400	55.07	35		1	1,707	2,072.12
July.....							20	159.89	47	6,800	22.82	20		1	1,380	1,580.56
August.....							12	172.89	125	22,000	47.89			2	1,365	1,887.78
September.....	3	275	11.42				9	141.30	111	10,000	50.22	65		2	1,004	1,874.68
October.....							6	136.30	111	18,890	67.07	97		2	1,277	2,432.03
November.....				8	21.26	1	14	173.00	121	22,500	95.06			1	1,267	1,806.06
December.....							6	105.89	11		14.22			1	373	482.92
Totals.....	10	1,125	74.17	16	48.01	6	96	1,389.21	1,798	130,730	616.80	151		16	11,599	17,307.48

In addition to the accompanying form, the following work has been performed by the sewer maintenance department for the year 1904:

#### WORK ON SEWERS.

Examined all sewers with candles for condition and deposit, and all gates, slots, and sumps for same forty-eight times. Repaired twenty-two gates, thirty-two holes, three sumps, sixty-eight manholes, seventeen house connections, and intake at brick station. Replaced 102 manhole frames, 152 manhole covers, three track grates and two gates. Reset 281 manhole frames; cut in twenty-three connections; brought six manholes to grade and removed roots from 108 sewers. Built retaining dam, overflow in intake, and pounded and sodded banks at brick station.

#### WORK ON BASINS.

Flushed 3,159 traps and 3,214 chutes to basin. Removed snow from 32,585 inlets and thawed out 869 chutes. Repaired twenty-nine basins, thirty-six chutes, forty-seven holes, five basin connections and thirty-one basins with gravel. Replaced twenty-two covers, four track grates, and thirteen traps. Reset eighty-three traps; re-connected one basin with sewer; removed roots from six chutes; put thirty-four extra traps in basins and one extra inlet frame and cover; altered thirty-six chutes and examined basins for concrete.

#### OLD WORK.

Repaired nine old drains, seven chutes, one old drain, and retaining wall on Promenade street; levelled seven dumps; built four chutes, and removed sand from sidewalk on Ernest street, east of Allens avenue.

#### MISCELLANEOUS WORK.

Flushed ninety private connections, charged \$210.00; flooded skating pond on Smith street \$2.50 and filled one cistern, \$2.00; pumped out twelve cellars, \$114.84, one cistern, \$7.20, and tank at Empire Theatre, \$8.00; supplied water for Rhode Island Company, \$30.25 and for New York, New Haven and Hartford Railroad Company, \$26.25; thawed out gravel for Edward W. Everson, \$4.00; puddled ditches and pumped out wells, \$177.29, and puddled one cellar, \$4.85; altered chutes, manholes, basins, and built basins for Rhode Island Company, \$510.86; built chute on Beach street for Brown & Sharpe Manufacturing Company, \$15.87; repaired sewer for Providence Journal Company.

For Sewer Construction Department: Built twenty basins, thirty-nine chutes, three manholes, one sump, two slots, seventy feet of fifteen-inch pipe sewer, twenty-four feet of twelve-inch pipe sewer, twenty-eight feet of eight-inch pipe sewer, seventy-one feet and nine inches of thirty-inch brick sewer, fifty-five feet of thirty-six-inch brick sewer and 101 feet of thirty-eight-inch brick sewer. Removed nine inspectors' houses.

For Water Maintenance Department: Made repairs and fired boilers at and removed ashes from Hope station, pounded banks at Hope reservoir.

Bills deposited with the city treasurer  
for collection from October 1 to December  
31, 1904, inclusive, amounted to . . . \$1,533 71

As follows:

Miscellaneous work.....	\$632 34
Cleaning private connections.....	75 75
Pumping out cellars, etc.....	5 00
Sewer material.....	817 22
Testing cement .....	3 40
	<hr/>
	\$1,533 71

During the quarter, coupons from bills  
collected have been returned by the city  
treasurer and receipted for to the amount  
of . . . . . \$1,623 10

As follows:

Miscellaneous work.....	\$630 59
Cleaning private connections.....	71 00
Pumping out cellars, etc.....	25 86
Sewer material.....	892 25
Testing cement.....	3 40
	<hr/>
	\$1,623 10

## HIGHWAYS.

Three permits to open streets were issued during the quarter.

October 17th, the proposal of the Connecticut Trap Rock Quarries to furnish and deliver in the city yard 1,000 tons of trap rock at \$1.20 per ton, was accepted.

November 11th, the proposal of the Taylor Iron and Steel Company to furnish and deliver various crusher castings for the sum of \$1,038.00, was accepted.

December 6th, the proposal of the Buffalo Steam Roller Company to furnish and deliver two sets of front wheels and one set of rear wheels for steam rollers for the sum of \$945.00, was accepted.

December 27th, the proposals of the following parties to furnish and deliver in the city yard granite blocks for the sum of \$1.50 per square yard, were accepted, namely :

Catto Granite Company.....	25,000 blocks.
Joseph Newall & Company.....	25,000 blocks.
Calder & Carnie.....	25,000 blocks.
Westerly Granite Works.....	25,000 blocks.
Smith Granite Company.....	10,000 blocks.

Nine hundred and eighty notices to build or repair sidewalks were served on the abutting owners during the year 1904. The work, including two hundred and fourteen brought over from the preceding year, was done as follows:

By the abutting owners.....	938
By the city, at the expense of the abutting owners.....	121
Extension of time for doing work granted to.....	31
Work not done.....	104

The length of received streets December 31, 1904, was 233.76 miles, measured on street lines and to street line intersections. But, as it is customary in street construction or street paving to complete the work to the curb line intersection, the lengths in the following tables are measured on those lines and sub-divided as follows:

Received streets.....	239.82 miles
Streets curbed and built .....	163.34 miles.
Streets not curbed, but the roadway macadamized or graveled.....	29.01 miles.
Streets paved.....	33.50 miles.
Streets received, but not improved.....	13.97 miles.
Total.....	239.82 miles.

The actual area of street pavement is 741,229 square yards. If this is estimated to an average width of roadway

of 30 feet, it would be equal to 42.11 lineal miles, and is sub-divided as follows :

Granite blocks.....	31.04 miles.
Cobble.....	5.11 miles.
Asphalt.....	5.07 miles.
Vulcanite.....	.47 miles.
Brick.....	.42 miles.

In addition to the general patching necessary to maintain the streets in good repair, the following work has been done during the year ending December 31, 1904, namely :

New streets built.....	11,495.00 linear feet.
Curbing set.....	21,519.00 linear feet.
Streets rebuilt.....	15,150.00 linear feet.
Streets resurfaced.....	173,225.00 linear feet.
Streets graded.....	5,940.00 linear feet.
Block pavement laid..	11,178.00 square yards.
Cobble pavement laid ..	None.
Asphalt pavement.....	3,961.35 square yards.
Asphalt pavement relaid.....	3,561.52 square yards.
Cobble pavement relaid.....	4,468.90 square yards.
Block paving relaid.....	19,023.02 square yards.
Brick paving relaid ..	369.79 square yards.
Concrete sidewalks laid.....	2,913.03 square yards.
Concrete sidewalks patched and top-dressed.....	4,457.27 square yards.
Crushed stone used.....	55,698.12 tons.
Screened gravel used.....	5,705.00 cubic yards.

Of the above amount of pavement relaid, the cost of relaying 10,360.09 square yards, amounting to \$17,127.76, was paid by the corporations for which the work was done.

During the year the following streets, aggregating 32.813 miles, have been resurfaced, namely :

Aborn street, from Sabin to West Exchange.  
 Adelaide avenue, from Reservoir to Downing street.  
 Admiral street, from Eagle Park to Douglas avenue.  
 Allens avenue, from Blackstone street to Public.  
 Alverson avenue, from Plainfield street to Hartford avenue.  
 America street, from Atwells avenue to Federal street.  
 Angell street, from Brook to Thayer.  
 Arch street, from Elmwood avenue to Junction street.  
 Armington avenue, from Academy to Carleton street.  
 Ashburton street, from Chalkstone avenue to Charles street.

Atwells avenue, from Bradford street to Arthur avenue.  
Atwells avenue, from Sabin street to Bourne.  
Bassett street, from Chestnut to Ship.  
Bates street, from Lippitt to Mallett.  
Bell street, from Eden to Eiswald.  
Benefit street, from Waterman to College.  
Beverly street, from Sabin to Mason.  
Blackstone street, from Prairie avenue to Eddy street.  
Bowdoin street, from Appleton to Amherst.  
Branch avenue, from Thurbers lane to Smithfield avenue.  
Broad street, from Public to Pine.  
Brook street, from Power to Angell.  
Brown street, from Olney to Waterman.  
Butler avenue, from Angell street to Irving avenue.  
California avenue, from Eddy street to Virginia avenue.  
Carpenter street, from Knight to Courtland.  
Chalkstone avenue, from Charles street to the railroad bridge.  
Chalkstone avenue, from River to Lisbon street.  
Chalkstone avenue, from Winthrop to Rowley street.  
Charles street, from Branch avenue to the railroad bridge.  
Claverick street, from Broad to Bassett.  
Clifford street, from Chestnut to Richmond.  
College street, from Benefit to South Main.  
Courtland street, from Westminster to Pierce.  
Crary street, from Plain to Hospital.  
Cromwell street, from Elmwood avenue to Dexter street.  
Daboll street, from Updike to Elmwood avenue.  
Diamond street, from Dexter to Hollis.  
Douglas avenue, from Admiral street to O'Neil.  
Dover street, from Pemberton to Carleton.  
Dudley street, from Eddy to Plain.  
Eddy street, from Pavilion avenue to Broad street.  
Eiswald street, from Bell to Grove.  
Elbow street, from Hospital to Ship.  
Elmwood avenue, from Earl street to Trinity square.  
Empire street, from Westminster to Fountain.  
Everett avenue, from Elmgrove to Wayland.  
Evergreen street, from North Main to Camp.  
Fillmore street, from Douglas avenue to Oregon street.  
Francis street, from Brownell to Smith.  
Frank street, from Plain to Prairie avenue.  
Fruit Hill avenue, from Manton to Woonasquatucket.  
George street, from Benefit to Brook.  
Globe street, from Hospital to Eddy.  
Grove street, from Valley to Harris avenue.  
Harrison street, from Westminster to Cranston.  
Hastings street, from Northup avenue to Ledge street.  
Hawkins street, from Admiral to Branch avenue.  
Hayward street, from Myrtle to Lockwood.  
Helme street, from Valley to Harris avenue.  
Hendrick street, from Academy avenue to Carleton street.

Hollis street, from Diamond to 200 feet westerly.  
 Hope street, from Lloyd avenue to Barnes street.  
 Hope street, from Pleasant to Cypress.  
 Hopkins street, from Benefit to South Main.  
 Hospital street, from Bassett to Globe.  
 Howell street, from Camp to North Main.  
 Huntington avenue, from Carter street to Westminster.  
 Julian street, from Amherst to Atwells avenue.  
 Kay street, from Thurbers avenue to the railroad.  
 Killingly street, from Hartford avenue to the city line.  
 Kossuth street, from Bowdoin to Hyat.  
 Laban street, from Gifford to Heath.  
 Laurel Hill avenue, from Plainfield street to Hartford avenue.  
 Ledge street, from Hastings to Smithfield avenue.  
 Lockwood street, from Pine to Broad.  
 Logan avenue, from Rugby to Prairie avenue.  
 Magnolia street, from Bancroft to Whitehall.  
 Mallett street, from Olney to Bates.  
 Manning street, from Brook to Thayer.  
 Manning street, from Hope to Governor.  
 Mason street, from Aborn to West Exchange.  
 Mawney street, from Updike to Elmwood avenue.  
 Merino avenue, from Barbara street to the bridge.  
 Messer street, from Westminster to Cranston.  
 North Grove street, from Smithfield avenue to Cemetery street.  
 North Main street, from Frost to Sexton.  
 Northup avenue, from Hastings street to Luna.  
 Olney street, from Hope to Camp.  
 Parade street, from Westminster to Wood.  
 Park street, from Brownell to Promenade.  
 Pettis street, from North Main to Printery.  
 Pitman street, from Waterman to Ives.  
 Plain street, from Elm to Potters avenue.  
 Planet street, from South Main to Benefit.  
 Pocasset avenue, from Webster to the city line.  
 Potters avenue, from Dexter street to Calhoun.  
 Potters avenue, from Eddy street to Ocean.  
 Power street, from South Main to Governor.  
 Promenade street, from Gaspee to Calverly.  
 Prospect street, from Olney to Waterman.  
 Putnam street, from Atwells avenue to Kossuth street.  
 Redwing street, from Elmwood avenue to Bucklin street.  
 Reservoir avenue, from Elmwood to Algonquin street.  
 Ringgold street, from Broadway to Carpenter street.  
 Rochambeau avenue, from Camp street to North Main.  
 Shawmut street, from Chalkstone avenue to Orms street.  
 Silver Spring street, from Charles to Branch avenue.  
 Smith street, from Canal to the railroad bridge.  
 Smith street, from Elmhurst avenue to Camden.  
 Smithfield avenue, from Ledge street to Northup avenue.  
 South Angell street, from Waterman to Butler avenue.

Sprague street, from Dexter to Elmwood avenue.  
Staniford street, from Bogman to Willard.  
Star street, from Benefit to North Main.  
Stewart street, from Westminster to Friendship.  
Stimson avenue, from Angell street to Hope.  
Superior street, from Dexter to Hollis.  
Superior street, from Cranston to Wendell.  
Thayer street, from Barnes to Angell.  
Thayer street, from Manning to Angell.  
Thomas street, from Benefit to North Main.  
Transit street, from South Main to Hope.  
Trinity square.  
Union avenue, from the railroad bridge to Messer street.  
Union avenue, from Webster to Laurel Hill.  
Vandewater street, from Douglas avenue to Branch.  
Veazie street, from Douglas avenue to Houghton street.  
Washington avenue, from Eddy street to Virginia avenue.  
Washington street, from Jackson to Knight.  
Waterloo street, from Dexter to Parade.  
Waterman street, from Prospect to North Main.  
Waterman street, from Butler avenue to East River street.  
Wayland avenue, from Angell street to Pitman.  
West Clifford street, from Somerset to Dudley.  
Whipple street, from Oregon to Douglas avenue.  
Williams street, from Hope to Governor.  
Willard avenue, from Broad street to Prairie avenue.  
Woodward road, from Veazie street to the city line.  
Woonasquatucket avenue, from Fruit Hill to the city line.  
Young Orchard avenue, from Hope street to Governor.

2.87 miles of streets have been rebuilt during the year—  
namely :

Elbow street, from Ship to Hospital.  
Elmwood avenue, from Earl street to Trinity square.  
Hawkins street, from Branch avenue to Cornwall street.  
West Clifford street, from Somerset to Dudley.

1.08 miles of streets have been graded during the year.  
namely :

Adelaide avenue, from Reservoir to Downing street.  
Algonquin street, from Reservoir avenue to Crescent street.  
Bath street, from Orms to Calverly.  
Dover street, from Mount Pleasant avenue westerly 150 feet.  
Elton street, from Elmgrove avenue to Taber.  
Magnolia street, from Bancroft to Whitehall.  
Mount Pleasant avenue, from Dover street northerly 150 feet.  
Troy street, from Westminster to Oak.  
University avenue, from Elmgrove to Wayland.



The following work was in progress December 31, 1904:

#### SIDEWALKS CURBED AND GUTTERS PAVED.

##### Date of order.

June 16, 1904, *Barre street, from Ridge to Bell.*  
 Oct. 20, " *Laban street, from corner of Laurel Hill avenue to Merino street.*

The following work, ordered by the board of aldermen and city council, had not commenced December 31, 1904, namely:

#### SIDEWALKS CURBED AND GUTTERS PAVED.

##### Date of order.

June 16, 1904, *Bell street, from Barre to Eden.*  
 Sept. 15, " *Nebraska street, from Eddy to Rugby.*  
 Oct. 20, " *Tiber street, from Ridge to Swiss.*  
 " " " *Grand street, from Potters avenue to Huntington.*  
 " " " *Eastwood avenue, from Laurel Hill to Merino street.*  
 Nov. 17, " *Ninth street, from North Main to Highland avenue.*  
 Dec. 15, " *Everett avenue, from Arlington to Elmgrove.*

Bills approved on account of highways from October 1 to December 31, 1904, inclusive, amounted to . . . . . \$84,242 07

#### Classified as follows:

Repairs on unpaved streets.....	\$22,134 73
Crushed stone — material and labor.....	17,824 90
Cleaning streets.....	15,715 35
Removing snow and ice.....	5,664 37
Repairs on paved streets.....	4,940 30
Stone — paving and crosswalk.....	3,614 47
Amount carried forward.....	\$69,894 12

Amount brought forward.....	\$69,894 12	
Blacksmith and wheelwright shop.....	3,306 39	
Barn expenses .....	2,968 40	
Labor on material.....	1,290 22	
Repairs on stone crushers.....	1,117 91	
Tools, implements, etc.....	958 34	
Steam rollers — repairs and supplies.....	816 70	
Repairs on buildings, highway yard.....	633 59	
Watering streets.....	449 10	
Superintendent's salary.....	446 86	
Horses, wagons, harnesses, etc.....	260 91	
Watchman at city yard.....	157 71	
Building driveways, etc.....	135 44	
Sundries .....	114 01	
Office expenses, city yard.....	74 06	
Car fares.....	40 00	
Fencing streets — material and labor.....	33 58	
Telephone lines.....	5 35	
		\$82,502 00

### NEW WORK — BUILDING AND REBUILD- ING STREETS, ETC.

#### SIDEWALKS CURBED AND GUTTERS PAVED.

<i>Algonquin street</i> , from Crescent to Reservoir avenue	\$44 69	
<i>Laban street</i> , from Laurel Hill avenue to Merino street.....	907 26	
<i>Rosedale street</i> , from Messer to Ellery.....	212 09	
<i>University avenue</i> , from Elmgrove to Slater.....	375 34	
		1,539 38
		\$84,242 00

Bills deposited with the city treasurer for collection from October 1 to December 31, 1904, inclusive, amounted to . . . \$15,489 30

As follows :

Labor and material.....	\$13,218 77
Blacksmith and harness work for other departments .....	900 07
Street sweepings.....	465 30
Building driveways, etc.....	451 92
Boarding horses for other departments.....	231 34
Use of steam rollers.....	105 00
Manure from barn .....	70 00
Removing trees.....	33 00
Empty oil barrels .....	4 00
	\$15,489 30

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$13,599 30

As follows :

Labor and material. ....	\$11,547 52
Blacksmith and harness work for other departments ...	615 63
Building driveways, etc. ....	525 51
Street sweepings. ....	515 30
Boarding horses for other departments ....	231 34
Manure from barn. ....	70 00
Use of steam rollers. ....	60 00
Removing trees. ....	30 00
Empty oil barrels. ....	4 00
	<hr/>
	\$13,599 30

## SIDEWALKS AND CURBING.

December 20th, the proposal of Crabtree & Havey to furnish and deliver on the city wharf 10,000 lineal feet of granite curbing at 50 cents per foot, was accepted.

Bills approved on account of sidewalks and curbing from October 1 to December 31, 1904, inclusive, amounted to \$3,085 09

Charged as follows :

Concreting sidewalks. ....	\$2,018 24
Repairing sidewalks and gutters. ....	1,055 10
Granite curbing. ....	11 75
	<hr/>
	\$3,085 09

Bills deposited with the city treasurer for collection from October 1 to December 31, 1904, inclusive, amounted to \$689 82

As follows :

Granite curbing.....	\$678 32
Repairing sidewalks and gutters.....	11 50
	<hr/>
	\$689 82

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$672 33

As follows :

Granite curbing.....	\$660 83
Repairing sidewalks and gutters.....	11 50
	<hr/>
	\$672 33

### CITY ENGINEER.

Bills approved on account of the city engineer's department from October 1 to December 31, 1904, inclusive, amounted to \$12,330 17

Charged as follows :

Salary — city engineer.....	\$1,125 00
Salaries of assistants.....	10,218 69
Salaries of clerks.....	808 43
Supplies — drawing material, etc.....	147 86
Telephone lines.....	23 49
Sundries.....	3 85
Car fares .....	2 20
Instruments and repairs.....	60
Meteorological instruments and repairs.....	05
	<hr/>
	\$12,330 17

### BRIDGES.

October 12th, the proposal of Edward W. Everson to furnish and lay Uralde asphalt upon the roadway and sidewalks of the new Post Office bridge and portions of Burnside and

Exchange bridges, was accepted and a contract subsequently executed. Amount, \$5,100.00.

During the quarter, the following work was completed, namely:

No. of resolution. Date of approval.

411. Dec. 19, 1902, *Exchange bridge on its northerly side; bridge over the river between Exchange and Burnside bridges; river walls between Burnside and Exchange bridges.*
232. June 21, 1904, *Build culvert across Allens avenue at outlet to Burgess cove, and the approaches thereto.*

Bills approved on account of bridges from October 1 to December 31, 1904, inclusive, amounted to . . . . . \$9,465 38

Charged as follows:

Acorn street bridge.....	\$9 74
Barn expenses.....	123 77
Building at city yard.....	68
Crawford street bridge.....	18 95
Culvert across Allens avenue at Burgess cove—to build.....	498 02
Eagle street bridge.....	2 11
Exchange bridge.....	8 80
Horses, wagons, harnesses, etc.....	6 20
Lumber, hardware, etc.....	619 60
Manton avenue bridge.....	22 22
Point street bridge.....	202 06
Red bridge.....	113 94
Rent of keeper's house— Washington bridge.....	36 00
Repairs on city wharf.....	4,721 23
Salaries— Point street bridge.....	1,013 00
Salaries— Red bridge.....	537 14
Salaries— Washington bridge.....	561 14
Sundries.....	311 25
Telephone lines.....	2 68
Tools.....	90 32
Washington bridge.....	194 12
Washington row bridge.....	329 65
Weybosset bridge.....	42 76
	<hr/>
	\$9,465 38

Bills approved for account of building the river walls between the Burnside and Exchange bridges, from October 1 to December 31, 1904, inclusive, have been paid from the special appropriation for that work, to the amount of

**\$47,245 20**

#### PUBLIC LIGHTS.

Bills approved on account of the public lights from October 1 to December 31, 1904, inclusive, amounted to . . . . .

**\$70,771 86**

Charged as follows:

Arc lights.....	\$51,803 99
Incandescent lights.....	12,663 86
Welsbach lights.....	6,106 87
Salaries.....	197 14
	<hr/>
	<b>\$70,771 86</b>

Bills deposited with the city treasurer for collection (for one gas-post), from October 1 to December 31, 1904, inclusive, amounted to . . . . .

**\$16 00**

During the quarter, coupons from bills collected (for one gas-post), have been returned by the city treasurer and receipted for to the amount of . . . . .

**\$16 00**

## PUBLIC WORKS OFFICE.

Bills approved on account of the public works office from October 1 to December 31, 1904, inclusive, amounted to . . . \$5,511 84

## Charged as follows:

Salaries of commissioner and secretary .....	\$1,850 00
Salaries of office assistants.....	3,424 17
Office supplies.....	219 38
Telephone lines.....	18 29
	<hr/>
	\$5,511 84

## ABOLISHING GRADE CROSSING AT GROVE STREET, Etc.

October 5th, the proposal of Frank A. Gammino to furnish labor and material for raising building belonging to the estate of William H. Hall, in connection with the building of Barre street, for the sum of \$395.00, was accepted.

The following work, ordered by the board of aldermen, was in progress December 31, 1904:

Date of order.

June 7, 1904, *Building retaining walls, etc., on Barre street.*

Bills approved for account of building retaining walls, etc., on Barre street, from October 1 to December 31, 1904, inclusive, have been paid from the special appropriation for that work, to the amount of . . . \$18,380 83

## CONTINGENCIES.

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of

\$3.00

As follows:

Inspection of electric wires..... \$3 00

WALTER F. SLADE,

*Commissioner.*



The following work was in progress December 31, 1904:

**SIDEWALKS CURBED AND GUTTERS PAVED.**

**Date of order.**

- June 16, 1904, *Barre street, from Ridge to Bell.*  
 Oct. 20, " *Laban street, from corner of Laurel Hill avenue to Merino street.*

The following work, ordered by the board of aldermen and city council, had not commenced December 31, 1904, namely:

**SIDEWALKS CURBED AND GUTTERS PAVED.**

**Date of order.**

- June 16, 1904, *Bell street, from Barre to Eden.*  
 Sept. 15, " *Nebraska street, from Eddy to Rugby.*  
 Oct. 20, " *Tiber street, from Ridge to Swiss.*  
 " " " *Grand street, from Potters avenue to Huntington.*  
 " " " *Eastwood avenue, from Laurel Hill to Merino street.*  
 Nov. 17, " *Ninth street, from North Main to Highland avenue.*  
 Dec. 15, " *Everett avenue, from Arlington to Elmgrove.*

Bills approved on account of highways  
 from October 1 to December 31, 1904, inclusive, amounted to . . . . . \$84,242 07

**Classified as follows:**

Repairs on unpaved streets.....	\$22,134 73
Crushed stone — material and labor.....	17,824 90
Cleaning streets.....	15,715 35
Removing snow and ice.....	5,664 37
Repairs on paved streets.....	4,940 30
Stone — paving and crosswalk.....	3,614 47
Amount carried forward.....	\$69,894 12

As follows :

Granite curbing.....	\$678 32
Repairing sidewalks and gutters.....	11 50
	<hr/>
	\$689 82

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$672 33

As follows :

Granite curbing.....	\$660 83
Repairing sidewalks and gutters.....	11 50
	<hr/>
	\$672 33

### CITY ENGINEER.

Bills approved on account of the city engineer's department from October 1 to December 31, 1904, inclusive, amounted to \$12,880 17

Charged as follows :

Salary — city engineer.....	\$1,125 00
Salaries of assistants.....	10,218 69
Salaries of clerks.....	808 43
Supplies — drawing material, etc.....	147 86
Telephone lines.....	23 49
Sundries.....	3 85
Car fares .....	2 20
Instruments and repairs.....	60
Meteorological instruments and repairs.....	05
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### BRIDGES.

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Bills approved on account of bridges from October 1 to December 31, 1904, inclusive, amounted to . . . . . \$9,465 38

Charged as follows:

Acorn street bridge.....	\$9 74
Barn expenses.....	123 77
Building at city yard.....	68
Crawford street bridge.....	18 95
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Bills approved on account of the public lights from October 1 to December 31, 1904, inclusive, amounted to **\$70,771 86**

Charged as follows :

Arc lights .....	\$51,803 99
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Salaries .....	197 14
	<hr/>
	<b>\$70,771 86</b>

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During the quarter, coupons from bills collected (for one gas-post), have been returned by the city treasurer and receipted for to the amount of **\$16 00**

## PUBLIC WORKS OFFICE.

Bills approved on account of the public works office from October 1 to December 31, 1904, inclusive, amounted to . . . \$5,511 84

## Charged as follows:

Salaries of commissioner and secretary .....	\$1,850 00
Salaries of office assistants.....	3,424 17
Office supplies.....	219 38
Telephone lines.....	18 29
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The following work, ordered by the board of aldermen, was in progress December 31, 1904:

## Date of order.

June 7, 1904, *Building retaining walls, etc., on Barre street.*

Bills approved for account of building retaining walls, etc., on Barre street, from October 1 to December 31, 1904, inclusive, have been paid from the special appropriation for that work, to the amount of . . . \$18,380 83

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CONTINGENCIES.

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of

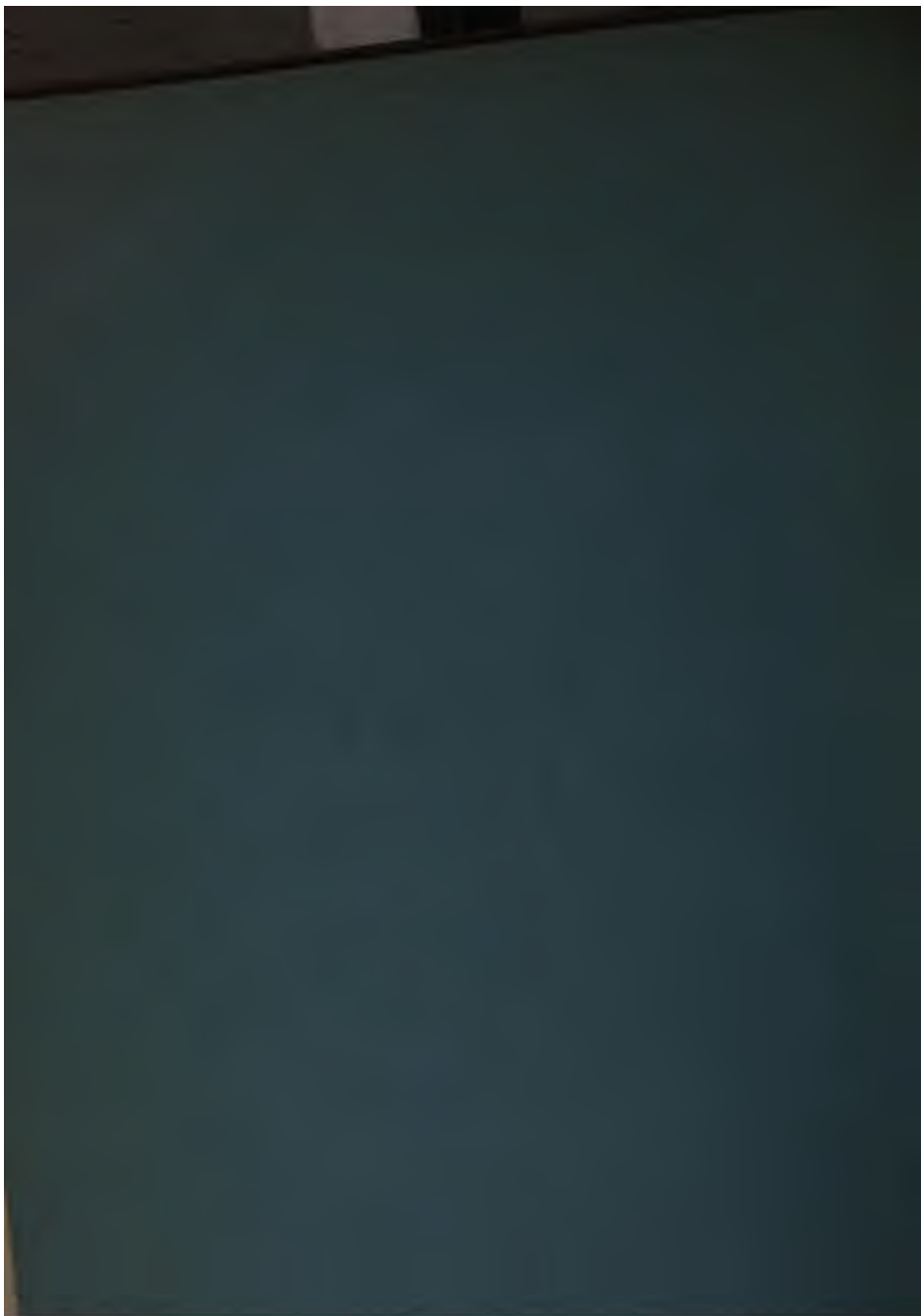
\$3.00

As follows:

Inspection of electric wires..... \$3 00

WALTER F. SLADE,

*Commissioner.*



1905.]

CITY DOCUMENT.

[No. 16.]

EIGHTY-NINTH  
QUARTERLY REPORT

OF THE

Department of Public Works

OF THE

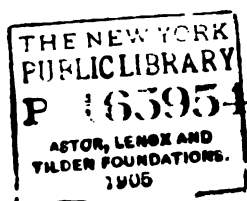
CITY OF PROVIDENCE, R. I.

QUARTER ENDING MARCH 31, 1905.



**The Providence Press:**  
**SNOW & FARNHAM, CITY PRINTERS,**  
63 Washington Street.  
1905.





# REPORT.

OFFICE OF THE DEPARTMENT OF PUBLIC WORKS, }  
CITY HALL, PROVIDENCE, R. I., April 1, 1905. }

TO THE HONORABLE THE CITY COUNCIL:

In compliance with the requirements of Chapter 41 of the ordinances, the Commissioner of Public Works respectfully presents the eighty-ninth quarterly report of the expenditures by the several departments under his direction and control, with statements of work ordered and the condition and cost of same, for the quarter ending March 31, 1905.

## WATER WORKS.

January 30th, the proposal of Fuller Iron Works to furnish and deliver at the city yard the special castings for the water and sewer departments for the year 1905, was accepted and a contract subsequently executed.

The proposal of Builders Iron Foundry to furnish and deliver at Pettaconset the special castings for a 42-inch force main at 3 $\frac{1}{4}$  cents per pound, including patterns, was accepted and a contract subsequently executed.

February 27th, the proposal of Edward W. Everson to cart 42-inch cast iron water pipe from the city yard to the force main line between Pettaconset and Sockanosset, at 90 cents per net ton, was accepted and a contract subsequently executed.

March 7th, the proposal of James H. Tower to furnish a steel crane with trolley and hoist for the sum of \$387.50 was accepted.

March 17th, the proposal of the Pettaconset Construction Company to lay the 42-inch force main at Pettaconset, was accepted and a contract executed later. Amount \$8,935.00.

March 18th, a contract was executed with the Pettaconset Construction Company for building two additional filter beds at Pettaconset, under the terms and conditions of the original contract dated July 15, 1902.

The average daily consumption of water during the last quarter was 14,230,265 gallons.

Water pipes were laid during the quarter as follows:

12-INCH.	
In Academy avenue.....	171.06 feet.
6-INCH.	
In Berkley and Fern streets and Academy avenue.....	514.32 feet.
Total.....	685.38 feet.

or .130 + mile.

Statement of sizes and lengths of pipe laid since the commencement of the work:

36-inch.....	10,084.00 feet.
30-inch.....	61,328.30 feet
24-inch.....	43,838.61 feet
20-inch.....	9,626.59 feet
16-inch.....	33,812.95 feet.
12-inch.....	106,246.95 feet.
10-inch.....	15,057.14 feet.
8-inch.....	293,390.96 feet.
6-inch.....	1,270,748.85 feet.
Total.....	1,823,934.35 feet.

or, 345.442 + miles.

Statement of sizes and lengths of pipe laid for the special water service for fire protection since the commencement of the work :

24-inch .....	4,297.46 feet.
18-inch .....	23,004.37 feet.
12-inch .....	2,215.76 feet.
<b>Total.</b> .....	<b>29,517.59 feet.</b>

or, 5.59 + miles.

Three fire hydrants have been set during the quarter, one in each of the following locations :

Regent avenue, north side, 6.5 feet east of east building line of Lisbon street.

Walcott street, east side, 158 feet south of south building line of Allston street.

West Park street, north side, 234 feet east of east building line of Valley street.

The total number of fire hydrants, exclusive of those for special service for fire protection, is now two thousand and thirty-three — nineteen hundred and twenty-seven flush, and one hundred and six post.

The total number of fire hydrants on the special water service for fire protection is ninety-two.

During the quarter, one hundred and forty-nine water meters were set, of which number forty-one were to replace other meters. The use of four meters was discontinued.

The following meters were in use at the close of the quarter :

KIND.	SIZE.									Total.
	$\frac{1}{8}$ -in.	$\frac{1}{4}$ -in.	1-in.	1 $\frac{1}{2}$ -in.	2-in.	3-in.	4-in.	6-in.	8-in.	
Ball & Fitts.....	1,952	408	97	11	4					2,472
Ball & Fitts, rotary.....			4	6		2	1			13
Crown.....	9,568	1,148	338	146	46	27	25	1		11,299
Empire.....	1,155	153	65	45	14	1	1			1,484
Fales, Jenks & Sons.....			1							1
Gem.....					13	29	18	3		63
Thomson.....	4,614	424	75	54	22	7	7	2		5,395
Trident.....	102		1							103
Venturi.....									1	1
Worthington.....	1				1					2
	17,392	2,133	581	262	100	66	52	6	1	20,581

One hundred and fifteen plumber's licenses were issued during the quarter, all of which expire December 31, 1905.

Four hundred and ninety-six permits to do plumbing work were issued during the quarter.

Fifty-five applications for water were made during the quarter, making the total number twenty-six thousand seven hundred and seventy.

The number of new service stops opened during the quarter was fifty-five.

The total number of service stops opened to March 31, 1905, inclusive, was twenty-six thousand and eighty-nine. The number in actual use March 31, 1905, was twenty-three thousand eight hundred and ninety-seven.

The amount of bills approved on account of water works from December 1, 1904, to March 31, 1905, inclusive, was:  
For maintenance, . . . . . \$102,847 24

Classified as follows:

## PETTACONSET PUMPING STATION.

Laying 42-inch force main from Pettaconset to Sockanosset.....	\$20,345 09	
Allis Chalmers high-duty engine, to furnish and erect.....	19,359 59	
Installation of sand filtration plant at Pettaconset.....	17,009 13	
Coal and wood.....	4,560 49	
Sundries.....	991 50	
Firemen.....	833 70	
Engineers.....	721 31	
Repairs on boilers.....	671 43	
Superintendence.....	415 07	
Corliss pumping engine and house.....	328 04	
Labor on fuel.....	326 20	
Real estate.....	321 64	
Cornish engine house.....	201 36	
Oil, waste and packing.....	184 03	
Worthington high-duty engine.....	159 55	
Barn expenses.....	45 27	
Care of grounds.....	43 60	
Lights.....	2 50	
		\$66,519 50

## SOCKANOSSET RESERVOIR.

Watchman.....	\$182 00	
Sundries.....	28 00	
		210 00

## HOPE PUMPING STATION.

Engineers.....	\$383 85	
Firemen.....	366 50	
Nagle pumping engine.....	214 59	
Holly pumping engine.....	108 29	
Lights.....	72 90	
Repairs on boilers.....	51 94	
Sundries.....	33 51	
Oil, waste and packing.....	4 51	
		1,236 09

## HOPE RESERVOIR.

Watchman.....	\$204 75	
Sundries.....	14 00	
		218 75

## FRUIT HILL RESERVOIR.

Watchman.....	\$204 75	
Sundries.....	154 95	
		359 70

Amount carried forward.....		\$68,544 04
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Amount brought forward.....		\$38,544 04
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**METER DEPARTMENT.**

Water meters.....	\$2,620 97	
Setting and repairing meters.....	1,496 65.	
		<u>4,117 62</u>

**PIPE LINE AND SERVICE STOPS.**

Repairs .....	\$2,506 35	
Inspection of pipe line and services.....	1,382 47	
Superintendence — salaries .....	874 25	
		<u>4,763 07</u>

**PIPE YARD.**

Cast iron water pipe....	\$6,415 18	
Fire hydrants, boxes and covers.....	2,694 92	
Laying water pipe.....	1,904 27	
Tools.....	1,472 11	
Stop valves.....	1,275 00	
Taps and stops.....	951 88	
Laying service pipe.....	477 33	
Special castings.....	471 51	
Labor on and carting pipe.....	164 25	
Pipe yard, office expenses.....	61 28	
Repairs on pipe yard buildings.....	28	
		<u>15,886 02</u>

**MISCELLANEOUS.**

Thawing out water pipe.....	\$6,312 48	
Clerks' and inspectors' salaries.....	1,589 40	
Barn expenses.....	662 00	
Prevention of defilement of the Pawtuxet.....	519 99	
Horses, wagons, harnesses, etc.....	160 43	
Telephone lines.....	122 68	
Sundries.....	55 48	
Car fares.....	40 00	
Real estate at Pawtuxet.....	39 73	
Public drinking fountains and troughs.....	2 30	
		<u>9,534 44</u>

\$102,847 2

The total expenditures to March 31,  
1905, inclusive, was . . . . . \$9,967,859 04

The net expenditure for maintenance from December 1,  
1904, to March 31, 1905, inclusive, was..... \$96,997 5

The net expenditure for maintenance to March 31, 1905,  
inclusive, was..... \$2,259,510 5

The value of the water works system  
January 1, 1905, as estimated by the city  
engineer, was as follows :

Pettaconset pumping station.....	\$340,694 00	
Hope pumping station.....	123,654 45	
Sockanosset, Hope and Fruit Hill reservoirs.....	699,014 97	
Main lines and distribution pipes.....	2,717,611 60	
Real estate in Pawtuxet and Lincoln .....	15,975 00	
Tools and supplies.....	35,113 01	
		<u>\$3,932,063 03</u>

Bills deposited with the city treasurer  
for collection from January 1 to March  
31, 1905, inclusive, amounted to . . \$447,478 72

As follows :

Water.....	\$442,434 18	
Water meters.....	2,047 75	
Setting and repairing meters.....	1,413 32	
Old lead and dross .....	595 90	
Labor and material, laying services, etc.....	521 33	
Rent of real estate.....	201 00	
Penalties.....	136 00	
Sale of old metal.....	122 24	
Permanently closing service stops.....	5 00	
Blue prints of water distribution.....	2 00	
		<u>\$447,478 72</u>

During the quarter, coupons from bills  
collected have been returned by the city  
treasurer and receipted for to the amount of \$436,991 06

As follows :

Water.....	\$431,005 39	
Water meters.....	2,145 75	
Setting and repairing meters.....	1,768 35	
Labor and material, laying services, etc.....	620 33	
Old lead and dross .....	595 90	
Sale of old metals.....	423 61	
Rent of real estate.....	191 00	
Penalties.....	136 00	
Repairs on pipe line .....	77 73	
Permanently closing service stops.....	5 00	
Blue prints of water distribution.....	2 00	
		<u>\$436,991 06</u>



## SEWERS.

During the quarter ending March 31, 1905, one hundred and twelve permits were issued to drain-layers — thirty-four for new work and seventy-eight for extensions and repairs of drains.

One hundred and twenty-nine drain-layer's licenses were issued during the quarter, all of which expire December 31, 1905.

January 19th, the proposal of the American and British Manufacturing Company to furnish and deliver at the Ernest street station two cast iron heads for surface condensers for the sum of \$250.00 was accepted.

During the quarter, assessments for the cost of constructing sewers were certified to the city treasurer as follows:

Reservoir avenue, west side, from Crescent street to Algonquin.....	\$1,307 11
West Park and Bath streets.....	7,140 09
Algonquin street, from Crescent to Holmes.....	2,130 42
Washington avenue, from Virginia to Eddy street.....	2,661 53
Elton street, from a point 100 feet east of Taber avenue to Elmgrove.....	739 40
Fairview and Pemberton streets.....	1,563 27
Vandewater street, from Douglas avenue to Branch.....	7,110 56
Nebraska street, from near Rugby to Eddy.....	600 00
Veazie street, from near Douglas avenue to Branch.....	4,318 32
Everett avenue, from Arlington to Elmgrove.....	2,763 18
	<hr/>
	\$30,424 48

March 27th, contracts for the construction of the following sewers were awarded and subsequently executed, namely:

[The amounts given below are what are estimated will be paid the contractors for labor, and do not include the cost of inspection and materials.]

## TO FREDERICK E. SHAW.

No. of resolution. Date of approval.

- 68. Feb. 7, 1905, *Pleasant Valley Division, Section 31.*
- 69. " " " *Elmdale avenue, Cleveland and Whitehall streets and Eastwood avenue.*
- 71. " " " *Reynolds avenue, Wadsworth and Grand streets.*
- 72. " " " *Linton and Robin streets..*

## FRANK A. GAMMINO.

- 61. Feb. 7, 1905, *Right of way from Valley street to Woonasquatucket river.*

## TIMOTHY F. LYONS.

- 70. Feb. 7, 1905, *Narragansett avenue, from city line northerly to point 600 feet north of Roger Williams avenue, and in right of way easterly to main trunk sewer.*

Work upon the following sewers was in progress at the close of the quarter, namely :

No. of resolution. Date of approval.

- 53. Feb. 2, 1904, *Admiral street, from Hillwood to end of present sewer in Admiral.*
- 330. Oct. 7, " *Douglas avenue, from Farmer street to Vandewater.*
- 60. Feb. 2, 1904, *Alverson, Eastwood, Laurel Hill and Hartford avenues.*
- 201. June 7, 1904, *Barre street, from Grove to about 1,300 feet northerly ; also westerly through right of way across tracks of N. Y., N. H. & H. R. R. Company to Harris avenue.*

Work upon the following sewers, completing the work ordered by the city council, had not commenced March 31, 1905, namely :

No. of resolution. Date of approval.

331. Oct. 7, 1904, *Reservoir avenue, from Elmwood to Adelaide, and in Adelaide avenue, from Reservoir westerly across land of the N. Y., N. H. & H. R. R. Company to main trunk sewer.*
61. Feb. 7, 1905, *Right of way from Valley street to Woonasquatucket river.*
68. " " " *Pleasant Valley Division, Section 31.*
69. " " " *Elmdale avenue, Cleveland and Whitehall street and Eastwood avenue.*
70. " " " *Narragansett avenue, from city line northerly to point 600 feet north of Roger Williams avenue, and in right of way easterly to the main trunk sewer.*
71. " " " *Reynolds avenue, Wadsworth and Grand streets.*
72. " " " *Linton and Robin streets.*

The amount of bills approved on account of sewers from January 1 to March 31, 1905, inclusive, was :

For construction, . . . . . \$9,891 92

Charged as follows :

Material . . . . .	\$2,502 50
Contract reservations . . . . .	1,261 00
Sundries . . . . .	248 55
Testing cement . . . . .	266 33
Additional catch-basins . . . . .	5 00
Tools . . . . .	2 17
Sewer in Admiral street, from Hillwood to end of present sewer in Admiral . . . . .	54 80
Sewer in Alverson, Eastwood, Laurel Hill and Hartford avenues . . . . .	5,427 76
Amount carried forward . . . . .	<u>\$9,808 11</u>

# REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 13

Amount brought forward.....	\$9,808 11	
Sewer in Barre street, from Grove to about 1,300 feet northerly; also westerly through right of way across tracks of N. Y., N. H. & H. R. R. Company to Harris avenue.....	14 00	
Sewer in Douglas avenue, from Farmer street to Vandewater.....	31 50	
Sewer in Thayer, Manning and Brook streets.....	38 31	
		\$9,891 92

For maintenance, . . . . . \$25,422 02

## Classified as follows:

Cleaning basins and sewers.....	\$6,141 10
Repairing basins and sewers.....	1,153 26
Horses, wagons, harnesses, etc.....	855 32
Cleaning and repairing old drains.....	847 47
Inspection of connections.....	639 08
Tools.....	548 84
Barn expenses.....	442 03
Salary, superintendent.....	442 00
Office expenses.....	75 21
Cleaning private connections.....	40 00
Telephone lines.....	35 93
Sundries.....	22 70
Car fares.....	10 00
Repairs on buildings, sewer maintenance yard....	47

## ERNEST STREET STATION.

Coal and wood.....	1,302 34
Repairs on engines.....	1,265 97
Engineers.....	725 26
Cleaning screens.....	578 37
Firemen.....	393 76
Cleaning and repairing pumps.....	135 56
Supplies.....	69 45
Care of grounds.....	58 78
Lights.....	36 90
Care of buildings.....	12 83
Repairs on buildings.....	78

## SEWAGE PRECIPITATION TANKS.

Chemicals.....	4,728 22
Labor in sludge disposal.....	2,099 34
Labor on sewage precipitation.....	1,292 40

Amount carried forward..... \$23,953 77

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Amount brought forward.....	\$23,953 37
Electrical power.....	496 50
Miscellaneous supplies.....	353 19
Repairs on buildings.....	281 69
Fuel.....	276 30
Lights.....	36 18
Repairs on machinery.....	25 79
	<hr/>
	\$25,422 02

The *net* expenditure for construction of sewers to March 31, 1905, inclusive, was..... \$7,654,679 2

The *net* expenditure for maintenance of sewers to March 31, 1905, inclusive, was..... \$1,182,333 3

Bills deposited with the city treasurer for collection from January 1 to March 31, 1905, inclusive, amounted to . . . \$566 78

As follows :

Cleaning private connections .....	\$53 25
Miscellaneous work.....	11 15
Filling cisterns, etc.....	9 30
Sewer material.....	489 38
Testing cement .....	3 70
	<hr/>
	\$566 78

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of . . . . . \$617 53

As follows :

Cleaning private connections.....	\$66 00
Miscellaneous work.....	49 15
Filling cisterns, etc.....	9 30
Sewer material.....	489 38
Testing cement.....	3 70
	<hr/>
	\$617 53

## HIGHWAYS.

One permit to open street was issued during the quarter.

February 6th, statements were prepared of the cost of curbstones set, ascertained by the Commissioner and certified to the board of aldermen for approval, as follows:

Algonquin street, from Crescent to Reservoir avenue.....	\$1,407 73
Bath street, from Orms to Calverley.....	1,709 23
Cole avenue, from Lloyd to Irving.....	550 77
Merino avenue, from Manton to the bridge.....	1,471 60
Elton street, from Taber avenue to Elmgrove.....	596 28
Fairview street, from Carleton to Pemberton.....	734 08
Hilton street, from Willard avenue to Bogman street.....	698 41
Rosedale street, from Messer to Ellery.....	1,140 58
Seventh street, from Summit avenue to North Main street....	1,454 16
Troy street, from Westminster to Oak.....	779 94
Thorne street, from Roanoke to Belmont avenue.....	285 80
University avenue, from Elmgrove to Slater.....	2,023 59
Wayland avenue, from Lloyd to Irving.....	550 44
	<hr/>
	\$13,402 61

February 11th, the proposal of the Taylor Iron and Steel Company to furnish certain parts of a screen for the stone crusher for the sum of \$823.20 was accepted.

The following work was in progress March 31, 1905:

## SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.

- June 16, 1904, *Barre street, from Ridge to Bell.*  
 Oct. 20, " *Laban street, from corner of Laurel Hill avenue to Merino street.*  
 Nov. 17, " *Ninth street, from North Main to Highland avenue.*  
 Mch. 16, 1905, *Reservoir avenue, west side, from Algonquin street to Crescent.*

The following work, ordered by the board of aldermen and city council, had not commenced March 31, 1905, namely :

#### SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.

June 16, 1904,	<i>Bell street, from Barre to Eden.</i>
Sept. 15, "	<i>Nebraska street, from Eddy to Rugby.</i>
Oct. 20, "	<i>Tiber street, from Ridge to Swiss.</i>
" " "	<i>Grand street, from Potters avenue to Huntington.</i>
" " "	<i>Eastwood avenue, from Laurel Hill to Merino street.</i>
Dec. 15, "	<i>Everett avenue, from Arlington to Elmgrove.</i>
Mch. 16, 1905,	<i>Elmdale avenue, from Whitehall street to Webster avenue.</i>
" " "	<i>Whitehall street, from Wallace to Union avenue.</i>
" " "	<i>Moulton street, from Westminster to Bewet.</i>

#### PAVE WITH GRANITE BLOCKS.

Feb. 7, 1905,	<i>Federal street, from Broadway to Bradford street.</i>
---------------	--

#### GRADE AND PUT IN SAFE CONDITION.

March 16, 1905, *Charles street, from Hagan to the city line.*

Bills approved on account of highways from January 1 to March 31, 1905, inclusive, amounted to . . . . . \$46,300 54

Classified as follows :

Removing snow and ice.....	\$13,450 05
Crushed stone—material and labor.....	9,297 39
Cleaning streets.....	3,783 03
Blacksmith and wheelwright shop.....	3,147 90
Steam rollers—repairs and supplies.....	2,933 80
Amount carried forward.....	\$32,612 17

# REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 17

Amount brought forward.....	\$32,612 17	
Repairs on unpaved streets.....	2,703 78	
Barn expenses.....	2,650 40	
Repairs on stone crushers.....	2,152 40	
Labor on material.....	1,718 27	
Horses, wagons, harnesses, etc.....	1,629 15	
Tools, implements, etc.....	966 57	
Stone—paving and crosswalk.....	780 28	
Superintendent's salary.....	408 00	
Watchman at city yard.....	144 00	
Office expenses, city yard.....	69 49	
Sundries.....	37 89	
Repairs on buildings, highway yard.....	19 78	
Repairs on paved streets.....	13 76	
Telephone lines.....	5 60	
		\$45,911 54

## NEW WORK — BUILDING AND REBUILD- ING STREETS, ETC.

### • SIDEWALKS CURBED AND GUTTERS PAVED.

<i>Eastwood avenue, from Laurel Hill to Merino street</i> .....	\$80 10	
<i>Everett avenue, from Arlington to Elmgrove.....</i>	109 05	
<i>Laban street, from corner Laurel Hill avenue to Merino street.....</i>	13 80	
<i>Nebraska street, from Eddy to Rugby.....</i>	35 45	
<i>Ninth street, from North Main to Highland avenue</i>	95 05	
<i>Reservoir avenue, west side, from Algonquin street to Crescent.....</i>	55 55	
		389 00
		\$46,300 54

Bills deposited with the city treasurer  
for collection from January 1 to March  
31, 1905, inclusive, amounted to . . . \$3,736 65

As follows:

Labor and material.....	\$3,085 50
Boarding horses for other departments.....	246 28
Street sweepings.....	234 45
Manure from barn.....	70 00
Blacksmith and harness work for other depart- ments.....	49 52
Use of water cart.....	16 00
Building driveways, etc.....	13 95
Removing snow and ice.....	8 55
Removing trees.....	7 00
Empty oil barrels.....	5 40
3	\$3,736 65



During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of **\$7,328 64**

As follows :

Labor and material .....	\$6,212 48
Blacksmith and harness work for other departments .....	371 72
Boarding horses for other departments .....	275 93
Street sweepings.....	234 45
Use of steam rollers.....	105 00
Manure from barn.....	70 00
Building driveways, etc.....	26 11
Use of water cart.....	16 00
Removing snow and ice.....	8 55
Empty oil barrels.....	5 40
Removing trees.....	3 00
	<hr/>
	<b>\$7,328 64</b>

### SIDEWALKS AND CURBING.

Bills approved on account of sidewalks and curbing from January 1 to March 31, 1905, inclusive, amounted to **\$384 20**

Charged as follows :

Concreting sidewalks.....	\$360 00
Repairing sidewalks and gutters.....	24 20
	<hr/>
	<b>\$384 20</b>

Curbing bills deposited with the city treasurer for collection from January 1 to March 31, 1905, inclusive, amounted to **\$13,402 61**

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$3,556 63

As follows:

Curbing bills.....	\$3,488 63
Granite curbing.....	68 00
	<hr/>
	\$3,556 63

#### CITY ENGINEER.

Bills approved on account of the city engineer's department from January 1 to March 31, 1905, inclusive, amounted to \$12,865 80

Charged as follows:

Salary — city engineer.....	\$1,125 00
Salaries of assistants.....	10,483 67
Salaries of clerks.....	789 75
Car fares.....	202 30
Supplies — drawing material, etc.....	190 29
Instruments and repairs.....	49 40
Telephone lines.....	23 49
Sundries.....	1 90
	<hr/>
	\$12,865 80

Bills deposited with the city treasurer for collection from January 1 to March 31, 1905, inclusive, for one wall map of Providence sold, amounted to \$12 00

During the quarter, coupons from bills collected for one wall map of Providence sold, have been returned by the city treasurer, and receipted for to the amount of \$12 00

## BRIDGES.

January 5, 1905, the proposal of William M. Harris, Jr. to furnish and deliver 33,000 feet of spruce plank for \$21.10 per M. was accepted.

The proposal of E. A. Card to furnish and deliver at the city yard one car load of white oak plank for \$25.00 per M. was accepted.

Bills approved on account of bridges from  
January 1 to March 31, 1905, inclusive,  
amounted to . . . . . \$4,952 70

## Charged as follows:

Barn expenses.....	\$109 67
Building at city yard.....	40
Car fares.....	25 00
Crawford street bridge.....	24 29
Culvert across Allens avenue at Burgess cove—to build.....	248 77
Horses, wagons, harnesses, etc.....	22 27
Lumber, hardware, etc.....	69 13
Manton bridge.....	1 50
Manton avenue bridge.....	1 75
Merino bridge.....	1 00
Mill street bridge.....	90
Point street bridge.....	422 51
Red bridge.....	93 20
Rent of keeper's house — Washington bridge.....	36 00
Repairs on city wharf.....	1,256 49
Salaries — Point street bridge.....	900 75
Salaries — Red bridge.....	474 00
Salaries — Washington bridge.....	481 00
Sundries.....	287 17
Telephone lines.....	2 68
Tools.....	229 08
Washington bridge.....	233 15
Washington row bridge.....	3 09
Weybosset bridge.....	28 90
	<hr/>
	\$4,952 70

Bills deposited with the city treasurer for collection from January 1 to March 31, 1905, inclusive, amounted to . . . \$208 17

As follows :

Old steel trusses.....	\$104 64
Paint stock.....	98 53
	<hr/>
	\$203 17

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$98 53

As follows :

Paint stock.....	\$98 53
------------------	---------

Bills approved for account of building the river walls between the Burnside and Exchange bridges, from January 1 to March 31, 1905, inclusive, have been paid from the special appropriation for that work, to the amount of \$3,161 78

## PUBLIC LIGHTS.

Bills approved on account of the public lights from January 1 to March 31, 1905, inclusive, amounted to . . . \$69,689 14

Charged as follows :

Arc lights.....	\$50,696 10
Incandescent lights.....	12,725 77
Welsbach lights.....	6,072 27
Salaries.....	195 00
	<hr/>
	\$69,689 14

Bills deposited with the city treasurer  
for collection from January 1 to March 31,  
1905, inclusive, amounted to . . . . . **\$36 76**

As follows :

Glass and paint stock.....	<b>\$25 76</b>
Lamp post and lanterns.....	<b>11 00</b>
	<hr/>
	<b>\$36 76</b>

During the quarter, coupons for bills  
collected have been returned by the city  
treasurer and receipted for to the amount of **\$32 76**

As follows :

Glass and paint stock.....	<b>\$25 76</b>
Lamp post and lanterns.....	<b>7 00</b>
	<hr/>
	<b>\$32 76</b>

## PUBLIC WORKS OFFICE.

Bills approved on account of the public  
works office from January 1 to March 31,  
1905, inclusive, amounted to . . . . . **\$5,211 25**

Charged as follows :

Salaries of commissioner and secretary.....	<b>\$1,850 00</b>
Salaries of office assistants.....	<b>3,201 26</b>
Office supplies.....	<b>141 70</b>
Telephone lines.....	<b>18 29</b>
	<hr/>
	<b>\$5,211 25</b>

**ABOLISHING GRADE CROSSING AT GROVE  
STREET, ETC.**

Bills approved for account of building retaining walls, etc., on Barre street, from January 1 to March 31, 1905, inclusive, have been paid from the special appropriation for that work, to the amount of . . . \$1,501 04

**WALTER F. SLADE,**  
*Commissioner.*



1905.]

CITY DOCUMENT.

[No. 18.]

NINETIETH  
QUARTERLY REPORT  
OF THE  
★  
Department of Public Works  
OF THE  
CITY OF PROVIDENCE, R. I.

QUARTER ENDING JUNE 30, 1905.



The Providence Press:  
SNOW & FARNHAM, CITY PRINTERS,  
63 Washington Street,  
1905.



Bills deposited with the city treasurer  
for collection from January 1 to March 31,  
1905, inclusive, amounted to . . . . . \$36 76

As follows :

Glass and paint stock.....	\$25 76
Lamp post and lanterns.....	11 00
	<hr/>
	\$36 76

During the quarter, coupons for bills  
collected have been returned by the city  
treasurer and receipted for to the amount of \$32 76

As follows :

Glass and paint stock.....	\$25 76
Lamp post and lanterns.....	7 00
	<hr/>
	\$32 76

## PUBLIC WORKS OFFICE.

Bills approved on account of the public  
works office from January 1 to March 31,  
1905, inclusive, amounted to . . . . . \$5,211 25

Charged as follows :

Salaries of commissioner and secretary.....	\$1,850 00
Salaries of office assistants.....	3,201 26
Office supplies.....	141 70
Telephone lines.....	18 29
	<hr/>
	\$5,211 25

# REPORT.

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OFFICE OF THE DEPARTMENT OF PUBLIC WORKS, }  
CITY HALL, PROVIDENCE, R. I., July 1, 1905. }

TO THE HONORABLE THE CITY COUNCIL:

In compliance with the requirements of Chapter 41 of the ordinances, the Commissioner of Public Works respectfully presents the ninetieth quarterly report of the expenditures by the several departments under his direction and control, with statements of work ordered and the condition and cost of same, for the quarter ending June 30, 1905.

## WATER WORKS.

April 4th, the proposal of the Coffin Valve Company to furnish and deliver in the city yard ten 12-inch water gates, Providence pattern, at \$50.00 each, was accepted.

June 2d, the proposal of the Coffin Valve Company to furnish and deliver in the city yard ten sluice valves and seven gate valves was accepted. Amount \$1,199.50.

June 5th, the proposal of Fuller Iron Works to furnish and deliver at Pettaconset, flange pipe and special castings for the filtration plant, at  $2\frac{3}{4}$  cents per pound, was accepted.

June 22d, the proposal of John R. White & Son to furnish the coal required to July 1, 1906, was accepted as follows :

For Pettaconset pumping station, New River, run of mine, at \$3.80 per net ton, delivered.

For the pipe yard, anthracite, at \$5.35 per net ton, at yard.

The average daily consumption of water during the last quarter was 14,559,549 gallons.

Water pipes were laid during the quarter as follows :

42-INCH.	
At Pettaconset for force main.....	2,855.01 feet.
36-INCH.	
At Pettaconset for force main.....	40.19 feet.
12-INCH.	
In Sprague and Westfield streets; Academy and Mt. Pleasant avenues.....	3,435.01 feet.
8-INCH.	
In Admiral and Hawkins streets, and Woodward road; and in Rolfe street, in the town of Cranston .....	451.24 feet.
6-INCH.	
In Aleppo, Ash, Brewster, Denison, Elm, Gloucester, Hart, Ivy, Metcalf, Montrose, Moulton, Sprague and Smith streets; Academy, Audubon, Everett, Fairfield, Norwood, Pomona and Reynolds avenues, and Wing court; and in Hudson place, Marion, Montgomery and Reservoir avenues, in the town of Cranston; and in Lyman avenue in the town of North Providence.....	5,602.37 feet.
Total.....	12,383.85 feet.
or 2.345 + miles.	

Water pipes were removed during the quarter as follows :

6-INCH.	
From Sprague street.....	1,059.72 feet.
or .2 + mile.	

Statement of sizes and lengths of pipe laid since the commencement of the work :

42-inch .....	2,855.01 feet.
36-inch .....	10,124.19 feet.
30-inch .....	61,328.30 feet.
24-inch .....	43,838.61 feet.
20-inch .....	9,626.59 feet.
16-inch .....	33,812.95 feet.
12-inch .....	109,681.99 feet.
10-inch .....	15,057.14 feet.
8-inch .....	293,842.20 feet.
6-inch .....	1,255,091.50 feet.
<b>Total.</b> .....	<b>1,835,258.48 feet.</b>

or, 347.586 + miles.

Statement of sizes and lengths of pipe laid for the special water service for fire protection since the commencement of the work :

24-inch .....	4,297.46 feet
16-inch .....	23,004.37 feet
12-inch .....	2,215.76 feet.
<b>Total.</b> .....	<b>29,517.59 feet.</b>

or, 5.59 + miles.

Thirteen fire hydrants have been set during the quarter, one in each of the following locations :

Academy avenue, east side, 7 feet south of Whitford.  
 Admiral street, north side, 1 foot east of Italy.  
 Aleppo street, southeast side, 3 feet northwest of Centerdale Worsted mill.  
 Allendale avenue, North Providence, 321 feet north of Metcalf. (Post).  
 Ash street, north side, 295 feet east of Hilton.  
 Elm street, south side, 22 feet west of Narragansett Electric Lighting Company's building.  
 Elmwood avenue, west side, 3 feet north of Dixon street.  
 Elmwood avenue, west side, 6 feet north of Sawyer street.  
 Hathaway street, north side, 207 feet west of Elmwood avenue.  
 Lyman avenue, North Providence, north side, 7.5 feet east of Glen street.  
 Reynolds avenue, north side, 159 feet west of Burnside street.  
 Sackett street, north side, 151 feet west of Melrose.  
 Spooner street, north side, 218 feet west of Elmwood avenue.

The total number of fire hydrants, exclusive of those for special service for fire protection, is now two thousand and forty-six — nineteen hundred and thirty-eight flush, and one hundred and eight post.

The total number of fire hydrants on the special water service for fire protection is ninety-two.

During the quarter, two hundred and six water meters were set, of which number forty-two were to replace other meters. The use of sixteen meters was discontinued.

The following meters were in use at the close of the quarter:

KIND.	SIZE.									Total.
	$\frac{1}{2}$ -in.	$\frac{3}{4}$ -in.	1-in.	1 $\frac{1}{4}$ -in.	2-in.	3-in.	4-in.	6-in.	8-in.	
Ball & Fitts.....	1,925	400	97	11	4					2,437
Ball & Fitts, rotary.....			4	6		2	1			13
Crown.....	9,616	1,162	342	146	48	27	25	1		11,367
Empire.....	1,207	156	66	46	13	1	1			1,490
Fales, Jenks & Sons.....			1							1
Gem.....					13	29	18	3		63
Nash.....	54									54
Thomson.....	4,619	424	74	54	22	7	7	2		5,209
Trident.....	103		1							104
Venturi.....									1	1
Worthington.....	1				1					2
	17,525	2,142	585	263	101	66	32	6	1	20,741

Four plumber's licenses were issued during the quarter, making the total number one hundred and nineteen, all of which expire December 31, 1905.

Eight hundred and ninety-four permits to do plumbing work were issued during the quarter.

Two hundred and fifty-seven applications for water were made during the quarter, making the total number twenty-seven thousand and twenty-seven.

The number of new service stops opened during the quarter was two hundred and fifteen.

The total number of service stops opened to June 30, 1905, inclusive, was twenty-six thousand three hundred and four. The number in actual use June 30, 1905, was twenty-four thousand two hundred twenty-nine.

The amount of bills approved on account of water works from April 1, to June 30, 1905, inclusive, was :

For maintenance, . . . . . \$123,425 77

Classified as follows :

PETTACONSET PUMPING STATION.

Laying 42-inch force main from Pettaconset to Sockanosset.....	\$29,750 19
Installation of sand filtration plant at Pettaconset.....	22,648 90
Allis Chalmers high-duty engine, to furnish and erect.....	19,278 80
Coal and wood.....	4,298 58
Sundries.....	1,078 04
Firemen.....	759 70
Engineers.....	727 76
Superintendence.....	416 00
Care of grounds.....	235 27
Repairs on boilers.....	220 46
Labor on fuel.....	143 40
Real estate.....	128 21
Oil, waste and packing.....	117 76
Sand filtration plant for miscellaneous supplies...	72 15
Cornish engine house.....	61 58
Amount carried forward.....	\$79,936 80

Amount brought forward.....	\$79,936 80	
Corliss pumping engine and house.....	59 91	
Barn expenses.....	48 87	
Worthington high-duty engine.....	20 73	
Lights.....	19 50	
	<u>          </u>	\$90,065 81

## SOCKANOSSET RESERVOIR.

Sundries.....	\$210 69	
Watchman.....	182 00	
	<u>          </u>	392 69

## HOPE PUMPING STATION.

Coal and wood.....	\$1,625 59	
Holly pumping engine.....	1,082 55	
Engineers.....	479 00	
Firemen.....	424 20	
Sundries.....	207 39	
Repairs on boilers.....	169 52	
Lights.....	90 90	
Oil, waste and packing.....	20 11	
	<u>          </u>	4,169 26

## HOPE RESERVOIR.

Sundries.....	\$452 97	
Watchman.....	204 75	
	<u>          </u>	657 72

## FRUIT HILL RESERVOIR.

Sundries.....	\$911 71	
Watchman.....	204 75	
	<u>          </u>	1,116 46

## METER DEPARTMENT.

Water meters.....	\$2,987 29	
Setting and repairing meters.....	1,474 65	
	<u>          </u>	4,461 94

## PIPE LINE AND SERVICE STOPS.

Repairs.....	\$3,796 65	
Inspection of pipe line and services.....	1,035 44	
Superintendence — salaries.....	874 25	
	<u>          </u>	5,706 34

## PIPE YARD.

Cast iron water pipe.....	\$6,811 03	
Fire hydrants, boxes and covers.....	5,103 20	
	<u>          </u>	
Amounts carried forward.....	\$11,914 23	\$96,570 21

REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 9

Amounts brought forward .....	\$11,914 23	\$96,570 22
Laying water pipe.....	3,929 63	
Special castings.....	1,780 65	
Laying service pipe.....	1,477 49	
Labor on and carting pipe.....	1,372 14	
Stop valves.....	680 30	
Tools.....	334 95	
Service pipe.....	281 51	
Pig lead and tin.....	97 81	
Taps and stops.....	55 02	
Repairs on pipe yard buildings.....	30 13	
Pipe yard, office expenses.....	23 97	
		21,978 43

MISCELLANEOUS.

Clerks' and inspectors' salaries....	\$1,739 40	
Horses, wagons, harnesses, etc.....	1,165 01	
Barn expenses.....	568 10	
Prevention of defilement of the Pawtuxet.....	549 99	
Car fares.....	250 00	
Inspection of water pipe with reference to electro- lysis.....	216 90	
Public drinking fountains and troughs.....	152 38	
Telephone lines.....	122 68	
Thawing out water pipe.....	112 66	
		4,877 12
		\$123,425 77

The total expenditures to June 30,  
1905, inclusive, was . . . . \$10,091,284 85

The *net* expenditure for maintenance from April 1,  
to June 30, 1905, inclusive, was..... \$117,379 93

The *net* expenditure for maintenance to June 30, 1905,  
inclusive, was..... \$2,376,890 50

The value of the water works system  
January 1, 1905, as estimated by the city  
engineer, was as follows:

Pettaconset pumping station.....	\$340,694 00	
Hope pumping station.....	123,654 45	
Sockanosset, Hope and Fruit Hill reservoirs.....	699,014 97	
Main lines and distribution pipes.....	2,717,611 60	
Real estate in Pawtuxet and Lincoln .....	15,975 00	
Tools and supplies.....	35,113 01	
		\$3,932,063 03



June 22d, the proposal of John R. White & Son to furnish the coal required to July 1, 1906, was accepted as follows:

For Pettaconset pumping station, New River, run of mine, at \$2.80 per net ton, delivered.

For the pipe yard, anthracite, at \$5.35 per net ton, at yard.

The average daily consumption of water during the last quarter was 14,559,549 gallons.

Water pipes were laid during the quarter as follows:

<b>42-INCH.</b>	
At Pettaconset for force main.....	2,855.01 feet.
<b>36-INCH.</b>	
At Pettaconset for force main.....	40.19 feet.
<b>12-INCH.</b>	
In Sprague and Westfield streets; Academy and Mt. Pleasant avenues.....	3,435.01 feet.
<b>8-INCH.</b>	
In Admiral and Hawkins streets, and Woodward road; and in Rolfe street, in the town of Cranston .....	451.24 feet.
<b>6-INCH.</b>	
In Aleppo, Ash, Brewster, Denison, Elm, Gloucester, Hart, Ivy, Metcalf, Montrose, Moulton, Sprague and Smith streets; Academy, Audubon, Everett, Fairfield, Norwood, Pomona and Reynolds avenues, and Wing court; and in Hudson place, Marion, Montgomery and Reservoir avenues, in the town of Cranston; and in Lyman avenue in the town of North Providence.....	5,602.37 feet.
Total.....	12,383.85 feet.
or 2.345 + miles.	

Water pipes were removed during the quarter as follows:

<b>6-INCH.</b>	
From Sprague street.....	1,059.72 feet.
or .2 + mile.	

1905.]

CITY DOCUMENT.

[No. 18.]

NINETIETH  
QUARTERLY REPORT

OF THE

★  
Department of Public Works

OF THE

CITY OF PROVIDENCE, R. I.

QUARTER ENDING JUNE 30, 1905.



The Providence Press:  
SNOW & FAENHAM, CITY PRINTERS,  
63 Washington Street,  
1905.

The total number of fire hydrants, exclusive of those for special service for fire protection, is now two thousand and forty-six — nineteen hundred and thirty-eight flush, and one hundred and eight post.

The total number of fire hydrants on the special water service for fire protection is ninety-two.

During the quarter, two hundred and six water meters were set, of which number forty-two were to replace other meters. The use of sixteen meters was discontinued.

The following meters were in use at the close of the quarter:

KIND.	SIZE.									Total.
	½-in.	¾-in.	1-in.	1½-in.	2-in.	3-in.	4-in.	6-in.	8-in.	
Ball & Fitts.....	1,925	400	97	11	4					2,437
Ball & Fitts, rotary....			4	6		2	1			13
Crown.....	9,616	1,162	342	146	48	27	25	1		11,557
Empire.....	1,207	156	66	46	13	1	1			1,490
Fales, Jenks & Sons....			1							1
Gem.....					13	29	18	3		63
Nash.....	54									54
Thomson.....	4,619	424	74	54	22	7	7	2		5,209
Trident.....	103		1							104
Venturi.....									1	1
Worthington.....	1				1					2
	17,525	2,112	585	263	101	66	52	6	1	20,741

Four plumber's licenses were issued during the quarter, making the total number one hundred and nineteen, all of which expire December 31, 1905.

# REPORT.

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OFFICE OF THE DEPARTMENT OF PUBLIC WORKS, }  
CITY HALL, PROVIDENCE, R. I., July 1, 1905. }

TO THE HONORABLE THE CITY COUNCIL:

In compliance with the requirements of Chapter 41 of the ordinances, the Commissioner of Public Works respectfully presents the ninetieth quarterly report of the expenditures by the several departments under his direction and control, with statements of work ordered and the condition and cost of same, for the quarter ending June 30, 1905.

## WATER WORKS.

April 4th, the proposal of the Coffin Valve Company to furnish and deliver in the city yard ten 12-inch water gates, Providence pattern, at \$50.00 each, was accepted.

June 2d, the proposal of the Coffin Valve Company to furnish and deliver in the city yard ten sluice valves and seven gate valves was accepted. Amount \$1,199.50.

June 5th, the proposal of Fuller Iron Works to furnish and deliver at Pettaconset, flange pipe and special castings for the filtration plant, at  $2\frac{3}{4}$  cents per pound, was accepted.

June 22d, the proposal of John R. White & Son to furnish the coal required to July 1, 1906, was accepted as follows:

For Pettaconset pumping station, New River, run of mine, at \$3.00 per net ton, delivered.

For the pipe yard, anthracite, at \$5.35 per net ton, at yard.

The average daily consumption of water during the last quarter was 14,559,549 gallons.

Water pipes were laid during the quarter as follows:

42-INCH.	
At Pettaconset for force main.....	2,855.01 feet.
36-INCH.	
At Pettaconset for force main.....	40.19 feet.
12-INCH.	
In Sprague and Westfield streets; Academy and Mt. Pleasant avenues.....	3,435.04 feet.
8-INCH.	
In Admiral and Hawkins streets, and Woodward road; and in Rolfe street, in the town of Cranston.....	451.24 feet.
6-INCH.	
In Aleppo, Ash, Brewster, Denison, Elm, Gloucester, Hart, Ivy, Metcalf, Montrose, Moulton, Sprague and Smith streets; Academy, Audubon, Everett, Fairfield, Norwood, Pomona and Reynolds avenues, and Wing court; and in Hudson place, Marion, Montgomery and Reservoir avenues, in the town of Cranston; and in Lyman avenue in the town of North Providence.....	5,602.37 feet.
Total.....	12,383.85 feet.
or 2.345 + miles.	

Water pipes were removed during the quarter as follows:

6-INCH.	
From Sprague street.....	1,059.72 feet.
or .2 + mile.	

# REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 9

Amounts brought forward.....	\$11,914 23	\$96,570 22
Laying water pipe.....	3,929 63	
Special castings.....	1,780 65	
Laying service pipe.....	1,477 49	
Labor on and carting pipe.....	1,372 14	
Stop valves.....	680 30	
Tools.....	334 95	
Service pipe.....	281 51	
Pig lead and tin.....	97 81	
Taps and stops.....	55 02	
Repairs on pipe yard buildings.....	30 13	
Pipe yard, office expenses.....	23 97	
		21,978 43

## MISCELLANEOUS.

Clerks' and inspectors' salaries....	\$1,739 40	
Horses, wagons, harnesses, etc.....	1,165 01	
Barn expenses.....	568 10	
Prevention of defilement of the Pawtuxet.....	549 99	
Car fares.....	250 00	
Inspection of water pipe with reference to electro- lysis.....	216 90	
Public drinking fountains and troughs.....	152 38	
Telephone lines.....	122 68	
Thawing out water pipe.....	112 66	
		4,877 12
		\$123,425 77

The total expenditures to June 30,  
1905, inclusive, was . . . . \$10,091,284 85

The *net* expenditure for maintenance from April 1,  
to June 30, 1905, inclusive, was..... \$117,379 93

The *net* expenditure for maintenance to June 30, 1905,  
inclusive, was..... \$2,376,890 50

The value of the water works system  
January 1, 1905, as estimated by the city  
engineer, was as follows:

Pettaconset pumping station.....	\$340,634 00	
Hope pumping station.....	123,654 45	
Sockanosset, Hope and Fruit Hill reservoirs.....	699,014 97	
Main lines and distribution pipes.....	2,717,611 60	
Real estate in Pawtuxet and Lincoln.....	15,975 00	
Tools and supplies.....	35,113 01	
		\$3,932,063 03

The total number of fire hydrants, exclusive of those for special service for fire protection, is now two thousand and forty-six — nineteen hundred and thirty-eight flush, and one hundred and eight post.

The total number of fire hydrants on the special water service for fire protection is ninety-two.

During the quarter, two hundred and six water meters were set, of which number forty-two were to replace other meters. The use of sixteen meters was discontinued.

The following meters were in use at the close of the quarter:

KIND.	SIZE.									Total.
	$\frac{1}{2}$ -in.	$\frac{3}{4}$ -in.	1-in.	1 $\frac{1}{4}$ -in.	2-in.	3-in.	4-in.	6-in.	8-in.	
Ball & Fitts.....	1,925	400	97	11	4					2,437
Ball & Fitts, rotary.....			4	6		2	1			13
Crown.....	9,616	1,162	342	146	48	27	25	1		11,525
Empire.....	1,207	156	66	46	13	1	1			1,430
Fales, Jenks & Sons.....			1							1
Gem.....					13	29	18	3		63
Nash.....	54									54
Thomson.....	4,619	424	74	54	22	7	7	2		5,209
Trident.....	103		1							104
Venturi.....									1	1
Worthington.....	1				1					2
	17,525	2,142	585	263	101	66	52	6		1 20,741

Four plumber's licenses were issued during the quarter, making the total number one hundred and nineteen, all of which expire December 31, 1905.

Eight hundred and ninety-four permits to do plumbing work were issued during the quarter.

Two hundred and fifty-seven applications for water were made during the quarter, making the total number twenty-seven thousand and twenty-seven.

The number of new service stops opened during the quarter was two hundred and fifteen.

The total number of service stops opened to June 30, 1905, inclusive, was twenty-six thousand three hundred and four. The number in actual use June 30, 1905, was twenty-four thousand two hundred twenty-nine.

The amount of bills approved on account of water works from April 1, to June 30, 1905, inclusive, was :

For maintenance, . . . . . \$123,425 77

Classified as follows :

PETTACONSET PUMPING STATION.

Laying 42-inch force main from Pettaconset to Sockanosset.....	\$29,750 19
Installation of sand filtration plant at Pettaconset.....	22,648 90
Allis Chalmers high-duty engine, to furnish and erect.....	19,278 80
Coal and wood.....	4,238 58
Sundries.....	1,078 04
Firemen.....	759 70
Engineers.....	727 76
Superintendence.....	416 00
Care of grounds.....	235 27
Repairs on boilers.....	220 46
Labor on fuel.....	143 40
Real estate.....	128 21
Oil, waste and packing.....	117 76
Sand filtration plant for miscellaneous supplies...	72 15
Cornish engine house.....	61 58
Amount carried forward.....	\$79,936 80



June 16th, contracts for the construction of the following sewers were awarded and subsequently executed, namely:

[The amounts given below are what are estimated will be paid the contractors for labor, and do not include the cost of inspection and materials.]

TO FREDERICK E. SHAW.

No. of resolution. Date of approval.

181.	May 5, 1905,	<i>Blackstone boulevard, west side, from north line of Glen avenue southerly to present end of sewer,</i>	\$900 00
219.	June 6, 1905,	<i>Northup avenue, from Silver Spring street to the westerly line of Edwards street, . . . . .</i>	1,203 10

TO CHARLES CRANKSHAW.

180.	May 5, 1905,	<i>Unit street, from Chalk- stone avenue to Maynard street, . . . . .</i>	4,256 10
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ALSO TO CHARLES CRANKSHAW, FROM JUNE 21ST.

No. of resolution. Date of approval.

245.	June 20, 1905,	<i>Rochambeau avenue, from the westerly line of Hope street, westerly about 425 feet to end of present sewer in Rochambeau avenue, . . . . .</i>	430 40
------	----------------	--	--------

June 22d, the proposal of John R. White & Son to furnish the coal required to July 1, 1906, was accepted, as follows:

Ernest street station, New River or Pocahontas, run of mine, at \$3.45 per net ton, delivered.

Sewer maintenance yard, New River or Pocahontas, run of mine, \$3.25, and lump, \$3.75, at bidder's yard.

Sewage precipitation tanks, anthracite, \$5.75 per net ton, delivered.

Sewer maintenance yard, anthracite, \$5.35, per net ton, at bidder's yard.

During the quarter, the construction of the following sewers was completed, namely :

No. of resolution.	Date of approval.	Date of completion.
53.	Feb. 2, 1904, <i>Admiral street, from Hillwood to end of present sewer in Admiral street,</i>	May 12, 1905.
60.	" " " <i>Alverson, Eastwood, Laurel Hill and Hartford avenues,</i>	June 9, 1905.
330.	Oct. 7, 1904, <i>Douglas avenue, from Farmer street to Vandewater,</i>	June 5, 1905.
331.	" " " <i>Reservoir avenue, from Elmwood to Adelaide, and in Adelaide avenue, from Reservoir westerly across land of the N. Y., N. H. &amp; H. R. R. Company to main trunk sewer,</i>	May 24, 1905.
71.	Feb. 7, 1905, <i>Reynolds avenue, Wadsworth and Grand streets,</i>	June 28, 1905.
72.	" " " <i>Linton and Robin streets,</i>	May 6, 1905.
182.	May 5, 1905, <i>Reservoir avenue, from Adelaide southerly to Gwinnett court,</i>	May 24, 1905.

Work upon the following sewers was in progress at the close of the quarter, namely :

No. of resolution.	Date of approval.
201.	June 7, 1904, <i>Barre street, from Grove to about 1,300 feet northerly; also westerly through right of way across tracks of N. Y., N. H. &amp; H. R. R. Company to Harris avenue.</i>

ged as follows :

.....	\$8,396 18	
reservations.....	1,127 00	
al catch-basins.....	577 02	
.....	551 24	
ement.....	288 75	
.....	19 07	
Admiral street, from Hillwood to end of nt sewer in Admiral.....	1,029 62	
Alverson, Eastwood, Laurel Hill and ford avenues.....	5,976 20	
Douglas avenue, from Farmer street to ewater.....	3,506 65	
Eighth street, from Summit avenue to Main street.....	560 83	
Elmdale and Eastwood avenues, White- and Cleveland streets.....	281 09	
Linton and Robin streets.....	1,146 06	
Narragansett avenue and in right of way city line to main trunk sewer.....	1,697 92	
Reservoir and Adelaide avenues.....	2,052 36	
Reynolds avenue, Wadsworth and Grand ts.....	1,545 90	
right of way, from Valley street to the nasquatucket river.....	2,404 51	
Rochambeau avenue, from Hope street rly to end of present sewer in Rocham- avenue.....	303 24	
Thayer, Manning and Brook streets ....	1,824 76	
Pleasant Valley Division, Section 31.....	5,856 73	
		\$39,145 13

intenance, . . . . . \$28,964 77

ified as follows :

basins and sewers.....	\$5,590 40
g basins and sewers.....	4,567 04
and repairing old drains.....	1,223 50
n of connections.....	706 10
perintendent.....	442 00
.....	395 07
senses.....	367 33
.....	335 54
vagons, harnesses, etc.....	184 63
e lines.....	35 93
private connections.....	34 00
.....	10 00
senses.....	7 10
n buildings, sewer maintenance yard....	1 38
ount carried forward.....	\$13,900 02

## No. of resolution. Date of approval.

61. Feb. 7, 1905, *Right of way from Valley street to Woonasquatucket river.*
68. " " " *Pleasant Valley Division, Section 31.*
69. " " " *Elmdale avenue, Cleveland and Whitehall streets and Eastwood avenue.*
70. " " " *Narragansett avenue, from city line northerly to point 600 feet north of Roger Williams avenue, and in right of way easterly to the main trunk sewer.*
245. June 20, 1905, *Rochambeau avenue, from the westerly line of Hope street, westerly about 425 feet to end of present sewer in Rochambeau avenue.*

Work upon the following sewers, completing the work ordered by the city council, had not commenced June 30, 1905, namely :

## No. of resolution. Date of approval.

180. May 5, 1905, *Unit street, from Chalkstone avenue to Maynard street.*
181. " " " *Blackstone boulevard, west side, from north line of Glen avenue, southerly to present end of sewer.*
219. June 6, 1905, *Northup avenue, from Silver Spring street to the westerly line of Edwards street.*

The amount of bills approved on account of sewers from April 1 to June 30, 1905, inclusive, was :

For construction, . . . . . \$39,145 13

## Charged as follows :

Material.....	\$8,396 18	
Contract reservations.....	1,127 00	
Additional catch-basins.....	577 02	
Sundries.....	551 24	
Testing cement.....	288 75	
Tools.....	19 07	
Sewer in Admiral street, from Hillwood to end of present sewer in Admiral.....	1,029 62	
Sewer in Alverson, Eastwood, Laurel Hill and Hartford avenues.....	5,976 20	
Sewer in Douglas avenue, from Farmer street to Vandewater.....	3,506 65	
Sewer in Eighth street, from Summit avenue to North Main street.....	560 83	
Sewer in Elmdale and Eastwood avenues, White- hall and Cleveland streets.....	281 09	
Sewer in Linton and Robin streets.....	1,146 06	
Sewer in Narragansett avenue and in right of way from city line to main trunk sewer.....	1,697 92	
Sewer in Reservoir and Adelaide avenues.....	2,052 36	
Sewer in Reynolds avenue, Wadsworth and Grand streets.....	1,545 90	
Sewer in right of way, from Valley street to the Woonasquatucket river.....	2,404 51	
Sewer in Rochambeau avenue, from Hope street westerly to end of present sewer in Rocham- beau avenue.....	303 24	
Sewer in Thayer, Manning and Brook streets ....	1,824 76	
Sewer in Pleasant Valley Division, Section 31.....	5,856 73	
		\$39,145 13

For maintenance, . . . . . \$28,964 77

## Classified as follows :

Cleaning basins and sewers.....	\$5,590 40
Repairing basins and sewers.....	4,567 04
Cleaning and repairing old drains.....	1,223 50
Inspection of connections.....	706 10
Salary, superintendent.....	442 00
Sundries .....	395 07
Barn expenses.....	367 33
Tools.....	335 54
Horses, wagons, harnesses, etc .....	184 63
Telephone lines.....	35 93
Cleaning private connections.....	34 00
Car fares.....	10 00
Office expenses.....	7 10
Repairs on buildings, sewer maintenance yard....	1 38
Amount carried forward.....	\$13,900 02

Amount brought forward..... \$13,900 02

**ERNEST STREET STATION.**

Coal and wood.....	1,304 09
Engineers.....	812 64
Cleaning and repairing pumps.....	726 37
Cleaning screens.....	638 77
Supplies.....	504 48
Firemen.....	419 56
Care of grounds.....	124 71
Repairs on engines.....	50 60
Lights.....	21 06
Care of buildings.....	4 09

**SEWAGE PRECIPITATION TANKS.**

Chemicals.....	5,589 30
Labor in sludge disposal.....	2,529 95
Labor on sewage precipitation.....	1,425 80
Electrical power.....	555 75
Repairs on tanks.....	123 79
Miscellaneous supplies.....	86 86
Fuel.....	79 68
Repairs on machinery.....	36 44
Lights.....	23 34
Repairs on buildings.....	6 97
	<u>\$28,964 77</u>

The *net* expenditure for construction of sewers to June 30, 1905, inclusive, was..... \$7,603,239 94

The *net* expenditure for maintenance of sewers to June 30, 1905, inclusive, was..... \$1,210,953 63

Bills deposited with the city treasurer for collection from April 1 to June 30, 1905, inclusive, amounted to . . . \$1,065 16

As follows :

Miscellaneous work.....	\$322 77
Sale of old metals.....	76 89
Cleaning private connections.....	38 25
Sale of old filter cloth.....	30 00
Empty oil barrels.....	12 80
Sewer material.....	525 50
Laying drains to curbstone.....	58 35
Testing cement.....	60
	<u>\$1,065 16</u>

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of . . . . . \$978 89

As follows:

Miscellaneous work.....	\$261 25
Sale of old metals.....	76 89
Cleaning private connections.....	43 50
Empty oil barrels.....	12 80
Sewer material.....	525 50
Laying drains to curbstone.....	58 35
Testing cement.....	60
	<hr/>
	\$978 89

## HIGHWAYS.

Four permits to open streets were issued during the quarter.

May 6th, the proposal of I. Capaldi & Company to furnish and deliver about 1,800 feet of granite curbing at 50 cents per linear foot, was accepted.

May 19th, the proposal of the Taylor Iron and Steel Company to furnish and deliver certain repairs for the Gates crusher for the sum of \$1,033, was accepted.

June 9th, the proposal of the Buffalo Steam Roller Company to furnish and deliver at the city yard one pair of steam roller wheels for \$500, was accepted.

June 13th, the proposal of The New England Granite Works to furnish and deliver at the city yard 500 square yards

of granite blocks each month to December 15, 1905, for the sum of \$1.50 per yard, was accepted.

June 19th, the proposal of Norcross Brothers Company to furnish and deliver at the city yard 500 tons of crushed stone at 95 cents per ton, was accepted.

June 21st, the proposal of Joseph Newall & Company to furnish and deliver at the city yard 50,000 granite blocks at \$1.50 per square yard, was accepted.

June 22nd, the proposal of John R. White & Son to furnish the coal required to July 1, 1906, was accepted at the following prices, namely :

New River or Pocahontas, run of mine...	\$3.25	per net ton at bidder's yard.
New River or Pocahontas, lump.....	\$3.75	" " " " "
Anthracite.....	\$5.35	" " " " "

June 29th, a statement of the cost of concreting sidewalks in sundry streets, with ten per centum added to cover the cost of assessing and collecting, was certified to the assessors of taxes, aggregating the sum of \$1,432.42.

During the quarter the following work was completed :

#### SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.

Sept. 15, 1904,	<i>Nebraska street, from Eddy to Rugby.</i>
Oct. 20, "	<i>Tiber street, from Ridge to Swiss.</i>
" " "	<i>Laban street, from corner of Laurel Hill avenue to Merino street.</i>
" " "	<i>Eastwood avenue, from Laurel Hill to Merino street.</i>
Nov. 17, "	<i>Ninth street, from North Main to Highland avenue.</i>
Dec. 15, "	<i>Everett avenue, from Arlington to Elmgrove.</i>
Mich. 16, 1905,	<i>Reservoir avenue, west side, from Algonquin street to Crescent.</i>



PAVE WITH GRANITE BLOCKS.

Date of order.

Feb. 7, 1905, *Federal street, from Broadway to Bradford street.*

PAVE WITH ASPHALT.

May 5, 1905, *Wyeth street, from South Main to South Water.*

GRADE AND PUT IN SAFE CONDITION.

March 16, 1905, *Charles street, from Hagan to the city line.*

The following work was in progress June 30, 1905:

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.

June 16, 1904, *Barre street, from Ridge to Bell.*

Oct. 20, 1904, *Grand street, from Potters avenue to Huntington.*

April 20, 1905, *Reynolds avenue, from Prairie to Burnside street.*

“ “ “ *Linton street, from Academy avenue to Canton street.*

“ “ “ *Robin street, from Berkeley to Regent avenue.*

REMOVE OBSTRUCTIONS, GRADE AND PUT IN GOOD  
CONDITION.

Date of order.

May 18, 1905, *Hope street, from Rochambeau avenue to city line.*

The following work, ordered by the board of aldermen and city council, had not commenced June 30, 1905, namely:

## SIDEWALKS CURBED AND GUTTERS PAVED,

## Date of order.

June 16, 1904, *Bell street, from Barre to Eden.*Mch. 16, 1905, *Elmdale avenue, from Whitehall street to Webster avenue.*" " " *Whitehall street, from Wallace to Union avenue.*" " " *Moulton street, from Westminster to Brewet.*May 18, 1905, *Narragansett avenue, from the city line northerly to a point about 120 feet north of Ardoene street.*" " " *Eastwood avenue, from Ralph street to Laurel Hill avenue.*" " " *Cleveland street, from its easterly termination to Laurel Hill avenue.*" " " *Wadsworth street, from Sorrento to Cranston.*

## PAVE WITH GRANITE BLOCKS.

May 5, 1905, *Sabin street, from West Exchange to Aborn.*

Bills approved on account of highways  
from April 1 to June 30, 1905, inclu-  
sive, amounted to . . . . . \$87,636 38

## Classified as follows :

Cleaning streets.....	\$23,013 82
Repairs on unpaved streets.....	16,758 00
Crushed stone—material and labor.....	10,473 34
Repairs on paved streets.....	3,878 44
Stone—paving and crosswalk.....	3,409 86
Blacksmith and wheelwright shop.....	2,851 22
Repairs on stone crushers.....	2,434 68
Barn expenses.....	2,231 65
Tools, implements, etc.....	932 50
Watering streets.....	862 04
Steam rollers—repairs and supplies.....	700 86

Amount carried forward..... \$67,546 41

Amount brought forward.....	\$67,546 41	
Labor on material.....	682 54	
Superintendent's salary.....	442 00	
Building driveways, etc.....	255 09	
Horses, wagons, harnesses, etc.....	250 26	
Watchman at city yard.....	156 40	
Sundries.....	150 71	
Fencing streets—material and labor.....	110 80	
Car fares.....	35 00	
Repairs on buildings, highway yard.....	29 03	
Office expenses, city yard.....	15 04	
Telephone lines.....	5 60	
		<u>\$69,678 88</u>

### NEW WORK — BUILDING AND REBUILD- ING STREETS, ETC.

#### SIDEWALKS CURBED AND GUTTERS PAVED.

<i>Eastwood avenue</i> , from Laurel Hill to Merino street	\$1,206 92	
<i>Elmdale avenue</i> , from Whitehall street to Webster avenue.....	101 70	
<i>Everett avenue</i> , from Arlington to Elmgrove.....	3,209 16	
<i>Grand street</i> , from Potter avenue to Huntington...	745 38	
<i>Laban street</i> , from Laurel Hill avenue to Merino street.....	766 22	
<i>Linton street</i> , from Academy avenue to Canton street.....	1,128 36	
<i>Nebraska street</i> , from Eddy to Rugby.....	782 41	
<i>Ninth street</i> , from North Main to Highland avenue	1,446 72	
<i>Reservoir avenue</i> , west side, from Algonquin street to Crescent.....	1,283 35	
<i>Reynolds avenue</i> , from Prairie to Burnside street..	151 70	
<i>Robin street</i> , from Berkley to Regent avenue.....	998 26	
<i>Tiber street</i> , from Ridge to Swiss.....	393 24	
		<u>12,213 42</u>

#### PAVE WITH GRANITE BLOCKS. ....

<i>Federal street</i> , from Broadway to Bradford street..	2,013 58
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#### PAVE WITH ASPHALT.

<i>Wyeth street</i> , from South Main to South Water.....	327 97
---	--------

#### GRADE AND PUT IN SAFE CONDITION.

<i>Charles street</i> , from Hagan to the city line.....	\$3,244 58	
<i>Hope street</i> , from Rochambeau avenue to the city line.....	157 95	
		<u>3,402 53</u>
		<u>\$87,636 38</u>

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of **\$108 89**

As follows :

Old steel trusses.....	<b>\$104 64</b>
Old scow.....	<b>3 00</b>
Old lumber.....	<b>1 25</b>
	<hr/>
	<b>\$108 89</b>

Bills approved for account of building the river walls between the Burnside and Exchange bridges, from April 1 to June 30, 1905, inclusive, have been paid from the special appropriation for that work, to the amount of **\$31 50**

Bills approved for account of rebuilding abutments and piers, Point street bridge from April 1 to June 30, 1905, inclusive, have been paid from the special appropriation for that work, to the amount of **\$96 37**

## PUBLIC LIGHTS.

Bills approved on account of the public lights from April 1 to June 30, 1905, inclusive, amounted to **\$70,375 20**

Charged as follows :

Arc lights.....	<b>\$51,237 07</b>
Incandescent lights.....	<b>12,721 38</b>
Welsbach lights.....	<b>6,221 75</b>
Salaries.....	<b>195 00</b>
	<hr/>
	<b>\$70,375 20</b>

## SIDEWALKS AND CURBING.

Bills approved on account of sidewalks and curbing from April 1 to June 30, 1905, inclusive, amounted to . . . \$7,970 20

### Charged as follows :

Granite curbing.....	\$4,496 43
Repairing sidewalks and gutters.....	1,807 34
Concreting sidewalks.....	1,666 03
	<hr/>
	\$7,970 20

Curbing bills deposited with the city treasurer for collection from April 1 to June 30, 1905, inclusive, amounted to . \$114 98

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$1,474 12

### As follows :

Curbing bills.....	\$1,404 75
Granite curbing.....	69 37
	<hr/>
	\$1,474 12

## CITY ENGINEER.

Bills approved on account of the city engineer's department from April 1 to June 30, 1905, inclusive, amounted to \$12,431 00

## Charged as follows:

Salary—city engineer.....	\$1,125 00
Salaries of assistants.....	10,109 34
Salaries of clerks.....	789 75
Car fares.....	203 05
Supplies—drawing material, etc.....	177 78
Telephone lines.....	25 18
Sundries.....	90
	<hr/>
	\$12,431 00

## BRIDGES.

May 8th, the proposal of the Narragansett Improvement Company to lay Bermudez asphalt pavement on the Charles street railroad bridge for \$2 per square yard, was accepted.

June 22nd, the proposal of John R. White & Son to furnish all the coal required to July 1, 1906, was accepted at the following prices, namely:

New River or Pocahontas, lump.....	\$4.00 per net ton delivered
Anthracite.....	\$5.75 " " "

June 26th, the proposal of William M. Harris, Jr., to furnish 22,000 feet of pine and spruce plank at \$20 to \$23.50 per M. feet, was accepted.

Bills approved on account of bridges from  
 April 1 to June 30, 1905, inclusive,  
 amounted to . . . . . \$7,663 03

Charged as follows:

Acorn street bridge.....	\$15 09
Barn expenses.....	91 51
Branch avenue bridge.....	28 80
Charles street railroad bridge.....	506 78
Contract reservation.....	70 00
Crawford street bridge.....	29 98
Gaspee street bridge.....	240 99
Horses, wagons, harnesses, etc.....	38 21
Lumber, hardware, etc.....	239 01
Manton bridge.....	2 09
Manton avenue bridge.....	68 22
Mill street bridge.....	1 50
Park street bridge.....	6 20
Point street bridge.....	399 92
Randall street bridge.....	35 66
Red bridge.....	605 83
Rent of keeper's house — Washington bridge.....	36 00
Repairs on city wharf.....	2,350 21
Salaries — Point street bridge.....	977 50
Salaries — Red bridge.....	513 50
Salaries — Washington bridge.....	513 50
Smith street bridge.....	3 04
Smithfield avenue bridge.....	25 00
Sundries.....	34 66
Telephone lines.....	2 68
Tools.....	24 69
Washington bridge.....	145 55
Washington row bridge.....	24 20
Weybosset bridge.....	632 71
	<hr/>
	\$7,663 03

Bills deposited with the city treasurer  
 for collection from April 1 to June 30,  
 1905, inclusive, amounted to . . . . . \$4 25

As follows:

Sale of old scow.....	\$3 00
Sale of old lumber.....	1 25
	<hr/>
	\$4 25

ABOLISHING GRADE CROSSING AT GROVE  
STREET, Etc.

June 1st, the proposal of Charles Crankshaw to build an eight-inch drain in Eiswald street, from right of way about 400 feet southerly, was accepted. Amount \$348.

Bills approved for account of building retaining walls, etc., on Barre street, from April 1 to June 30, 1905, inclusive, have been paid from the special appropriation for that work, to the amount of . . . \$13,294 30

Bills deposited with the city treasurer for collection from April 1 to June 30, 1905, inclusive, for building eight-inch drain, amounted to . . . . . \$300 00

WALTER F. SLADE,  
*Commissioner.*



Bills deposited with the city treasurer  
for collection from April 1 to June 30,  
1905, inclusive, amounted to . . . \$11 00

As follows:

Removing gas post.....	\$6 00
Lanterns and frames.....	5 00
	<hr/>
	\$11 00

During the quarter, coupons from bills  
collected have been returned by the city  
treasurer and receipted for to the amount of \$15 00

As follows:

Lamp post and lantern.....	\$9 00
Removing gas post.....	6 00
	<hr/>
	\$15 00

## PUBLIC WORKS OFFICE.

Bills approved on account of the public  
works office from April 1 to June 30,  
1905, inclusive, amounted to . . . \$5,086 47

Charged as follows:

Salaries of commissioner and secretary.....	\$1,850 00
Salaries of office assistants.....	3,023 66
Office supplies.....	193 25
Telephone lines.....	19 56
	<hr/>
	\$5,086 47

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**ABOLISHING GRADE CROSSING AT GROVE  
STREET, Etc.**

June 1st, the proposal of Charles Crankshaw to build an eight-inch drain in Eiswald street, from right of way about 400 feet southerly, was accepted. Amount \$348.

Bills approved for account of building retaining walls, etc., on Barre street, from April 1 to June 30, 1905, inclusive, have been paid from the special appropriation for that work, to the amount of . . . **\$13,294 30**

Bills deposited with the city treasurer for collection from April 1 to June 30, 1905, inclusive, for building eight-inch drain, amounted to . . . . . **\$300 00**

**WALTER F. SLADE,**

*Commissioner.*

1905.] . CITY DOCUMENT.

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NINETY-FIRST  
QUARTERLY REPORT  
OF THE  
Department of Public  
OF THE  
CITY OF PROVIDENCE, R.  

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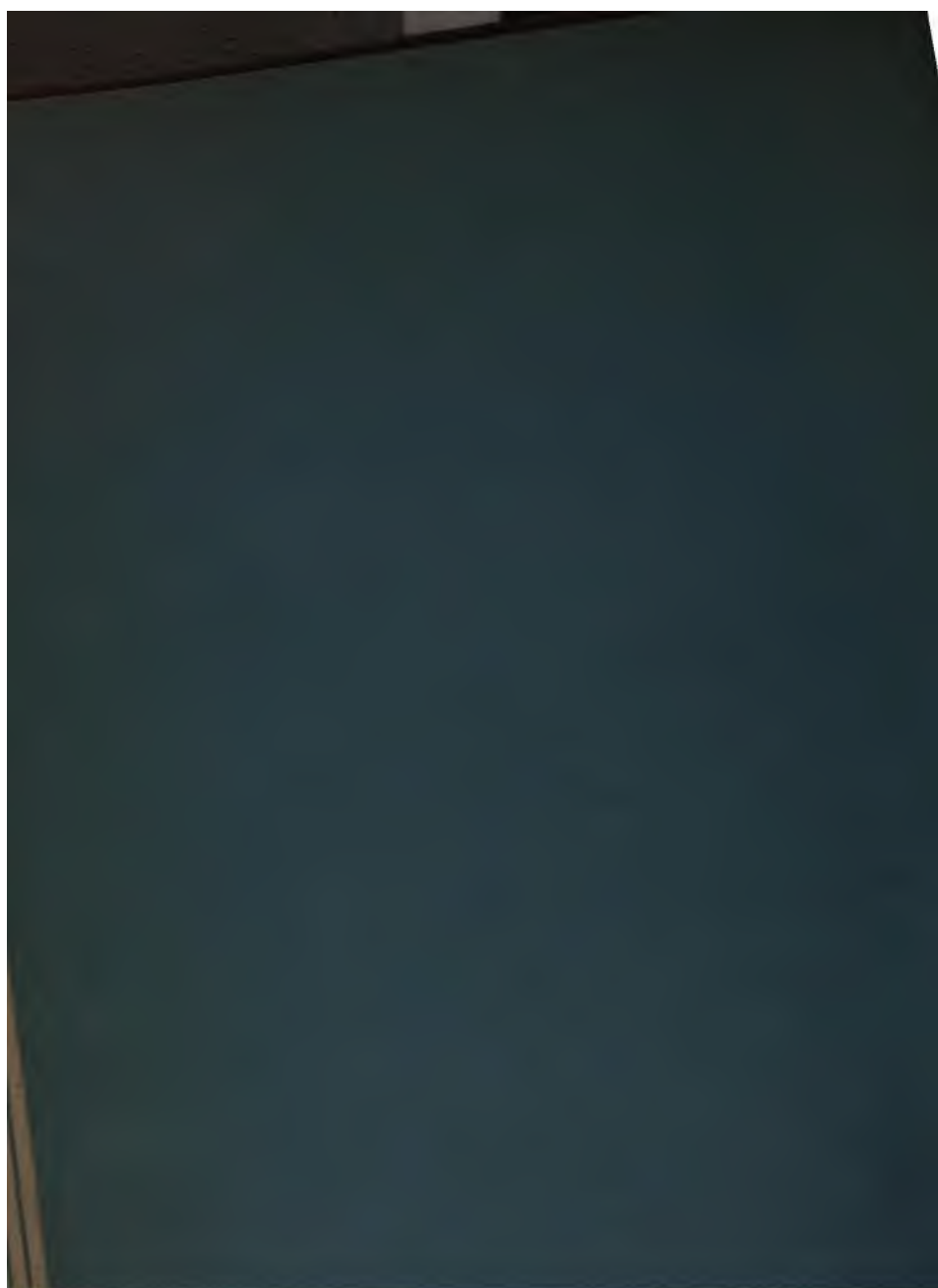
QUARTER ENDING SEPTEMBER



The Providence Press  
SNOW & FARNHAM, CITY PRINTERS  
65 Washington Street.

1905.

A.W.



1905.]

CITY DOCUMENT.

NINETY-FIRST  
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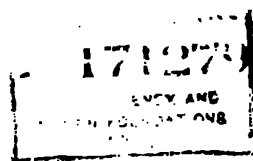
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SNOW & FARNHAM, CITY PRINTERS,  
63 Washington Street.

1905.

Q. W.



# REPORT.

OFFICE OF THE DEPARTMENT OF PUBLIC WORKS, }  
CITY HALL, PROVIDENCE, R. I., October 2, 1905. }

TO THE HONORABLE THE CITY COUNCIL:

In compliance with the requirements of Chapter 41 of the ordinances, the Commissioner of Public Works respectfully presents the ninety-first quarterly report of the expenditures by the several departments under his direction and control, with statements of work ordered and the condition and cost of same, for the quarter ending September 30, 1905.

## WATER WORKS.

July 1st, the proposal of James H. Tower to furnish and install at Pettaconset pumping station a bar iron grated floor, and brass guard rails around fly wheel of engine, for the sum of \$1,000.00, was accepted.

July 14th, the proposal of the Park Brew Company to furnish the ice required in the various drinking fountains during the season for \$2.50 per ton, was accepted.

August 11th, the proposal of John I. Drake to furnish and install at Pettaconset pumping station a direct connected engine and dynamo for 150 lamps, a slate switch-board with full set of instruments, and also to install certain

lamps, and connect old system of lighting to the new board, for the sum of \$1,423.00, was accepted.

August 29th, the proposal of Builders Iron Foundry to furnish and deliver at Pettaconset pumping station two 20-inch Venturi meters, with regular geared indicators, for \$864.00, was accepted.

September 19th, the sum of \$45.00 was paid by Louis H. Meyer for cost of laying water pipe in Whitehall street under provisions of the city council resolution 297 approved June 21, 1895.

The average daily consumption of water during the last quarter was 14,886,702 gallons.

Water pipes were laid during the quarter as follows:

42-INCH.	
At Pettaconset for force main.....	2,124.48 feet.
36-INCH.	
At Pettaconset for force main.....	83.38 feet
12-INCH.	
In Dexter and Hope streets and Park avenue.....	1,153.38 feet.
8-INCH.	
In Carleton street.....	384.40 feet.
6-INCH.	
In Abo, Barre, Benton, Burke, Cleveland, Darien, David, Daboll, Eighth, Erin, Eudora, Fisher, Longmont, Merino, Newark, Rugby, Seymour, Sixth, Shafter, Tenth and Wadsworth streets; Eastwood, Morris, Terrace and Farmington avenues; in Dunedin street: Farmington, Meadow and Orchard avenues; Selkirk, Stratford and Strathmore roads; and in Scattergood place in the town of Cranston; and in Hillside avenue in the town of Johnston.....	6,153.08 feet.
Total.....	9,898.72 feet.

or 1.874 + miles.



Water pipes were removed or abandoned during the quarter as follows :

<b>24-INCH.</b>	
At Pettaconset.....	544.75 feet.
<b>8-INCH.</b>	
From Acorn street.....	220.45 feet.
<b>6-INCH.</b>	
From Dexter street.....	615.96 feet.
<b>Total.....</b>	<b>1,381.16 feet.</b>

or .261 + mile.

Statement of sizes and lengths of pipe laid since the commencement of the work :

42-inch.....	4,979.49 feet.
36-inch.....	10,207.57 feet.
30-inch.....	61,328.30 feet.
24-inch.....	43,293.86 feet.
20-inch.....	9,626.59 feet.
16-inch.....	33,812.95 feet.
12-inch.....	110,835.37 feet.
10-inch.....	15,057.14 feet.
8-inch.....	294,006.15 feet.
6-inch.....	1,260,628.62 feet.
<b>Total.....</b>	<b>1,843,776.04 feet.</b>

or, 349.2 + miles.

Statement of sizes and lengths of pipe laid for the special water service for fire protection since the commencement of the work :

24-inch.....	4,297.46 feet
16-inch.....	23,004.37 feet
12-inch.....	2,215.76 feet.
<b>Total.....</b>	<b>29,517.59 feet.</b>

or, 5.59 + miles.

Seven fire hydrants have been set during the quarter, one in each of the following locations :

Charles street, east side, 5 feet south of Christopher street.  
 Dexter street, east side, 6 feet south of Mawney street.  
 Douglas avenue, North Providence, west side, 90 feet south of Tiffany street.

Elmdale avenue, north side, 239 feet east of Webster avenue.

Elmdale avenue, north side, 245 feet west of Whitehall street.

Hope street, east side, 6.5 feet south of Ogden street.

Park avenue, south side, 800 feet east of Elmwood avenue.

The total number of fire hydrants, exclusive of those for special service for fire protection, is now two thousand and fifty-three — nineteen hundred and forty-four flush, and one hundred and nine post.

The total number of fire hydrants on the special water service for fire protection is ninety-two.

During the quarter, two hundred and sixty water meters were set, of which number forty were to replace other meters. The use of eleven meters was discontinued.

The following meters were in use at the close of the quarter:

KIND.	SIZE.									TOTAL.
	$\frac{3}{4}$ -in.	$\frac{1}{2}$ -in.	1-in.	1 $\frac{1}{4}$ -in.	2-in.	3-in.	4-in.	6-in.	8-in.	
Ball & Fitts.....	1,893	396	95	11	4	.....	.....	.....	.....	2,399
Ball & Fitts, rotary...	.....	.....	4	6	.....	2	1	.....	.....	13
Crown.....	9,662	1,177	352	147	48	29	26	1	.....	11,442
Empire.....	1,280	162	67	46	14	1	1	.....	.....	1,571
Fales, Jenks & Sons..	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Gem.....	.....	.....	.....	.....	15	29	18	3	.....	.....
Nash.....	145	.....	.....	.....	.....	.....	.....	.....	.....	145
Thomson.....	4,618	423	74	54	22	7	7	2	.....	5,207
Trident.....	103	.....	1	.....	.....	.....	.....	.....	.....	104
Venturi.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1
Worthington.....	1	.....	.....	.....	1	.....	.....	.....	.....	2
	17,702	2,158	594	264	104	68	53	6	1	20,926

One plumber's license was issued during the quarter, making the total number one hundred and twenty, all of which expire December 31, 1905.

Six hundred and eighty-seven permits to do plumbing work were issued during the quarter.

One hundred and sixty-seven applications for water were made during the quarter, making the total number twenty-seven thousand one hundred and ninety-four.

The number of new service stops opened during the quarter was two hundred and four.

The total number of service stops opened to September 30, 1905, inclusive, was twenty-six thousand five hundred and eight. The number in actual use September 30, 1905, was twenty-four thousand four hundred and fifty-four.

The amount of bills approved on account of water works from July 1, to September 30, 1905, inclusive, was :

For maintenance, . . . . . \$89,724 01

Classified as follows :

PETTACONSET PUMPING STATION.

Installation of sand filtration plant at Pettaconset.	\$25,313 99
Allis-Chalmers high-duty engine, to furnish and erect.....	19,036 28
Coal and wood.....	5,939 27
Laying 42-inch force main from Pettaconset to Sockanosset.....	5,863 32
Cornish engine house.....	1,405 72
Sundries.....	1,108 23
Leading main from Sockanosset to city — to lay ..	1,000 00
Firemen.....	814 90
Engineers.....	655 96
Superintendence.....	416 00
Real estate.....	372 56
Amount carried forward.....	\$61,926 23

Amount brought forward.....	\$61,928 23	
Corliss pumping engine and house.....	297 43	
Oil, waste and packing.....	312 32	
Sand filtration plant for miscellaneous supplies...	148 21	
Care of grounds.....	138 00	
Repairs on boilers.....	127 18	
Labor on fuel.....	125 00	
Worthington high-duty engine.....	115 19	
Barn expenses .....	57 36	
Lights.....	2 30	
		<u>\$63,149 21</u>

## SOCKANOSSET RESERVOIR.

Watchman.....	\$182 00	
Sundries.....	110 72	
		<u>292 72</u>

## HOPE PUMPING STATION.

Firemen.....	\$451 90	
Engineers.....	319 57	
Sundries.....	71 96	
Lights.....	49 90	
Coal and wood.....	13 13	
Holly pumping engine.....	23	
		<u>906 69</u>

## HOPE RESERVOIR.

Sundries.....	\$268 29	
Watchman.....	204 75	
		<u>473 04</u>

## FRUIT HILL RESERVOIR.

Sundries.....	\$735 80	
Watchman.....	194 50	
		<u>930 30</u>

## METER DEPARTMENT.

Water meters .....	\$4,379 38	
Setting and repairing meters. ....	1,667 88	
		<u>6,047 26</u>

## PIPE LINE AND SERVICE STOPS.

Repairs .....	\$4,494 56	
Inspection of pipe line and services.....	1,483 04	
Superintendence salaries .....	876 63	
		<u>6,854 23</u>

Amount carried forward ..... \$78,633 45

REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 9

Amount brought forward.....	\$78,653 45
<b>PIPE YARD.</b>	
Laying water pipe.....	\$3,493 73
Laying service pipe.....	1,457 36
Special castings.....	945 79
Service pipe.....	605 50
Pig lead and tin.....	483 26
Tools.....	319 38
Labor on and carting pipe.....	204 30
Pipe yard, office expenses.....	57 64
Fire hydrants, boxes and covers.....	45 50
Taps and stops.....	37 25
Repairs on pipe yard buildings.....	5 52
	<hr/> 7,655 23
<b>MISCELLANEOUS.</b>	
Clerks' and inspectors' salaries.....	\$1,739 40
Barn expenses.....	644 19
Prevention of defilement of the Pawtuxet.....	549 99
Car fares.....	150 00
Horses, wagons, harnesses, etc.....	148 16
Telephone lines.....	122 68
Real Estate in Lincoln.....	27 50
Public drinking fountains and troughs.....	26 68
Sundries.....	6 73
	<hr/> 3,415 33
	<hr/> \$89,724 01

The total expenditures to September 30,  
1905, inclusive, was . . . . . \$10,181,008 86

The *net* expenditure for maintenance from July 1,  
to September 30, 1905, inclusive, was..... \$81,334 90

The *net* expenditure for maintenance to September 30, 1905,  
inclusive, was..... \$2,458,225 40

The value of the water works system  
January 1, 1905, as estimated by the city  
engineer, was as follows:

Pettaconset pumping station.....	\$340,694 00
Hope pumping station.....	123,654 45
Sockanosset, Hope and Fruit Hill reservoirs.....	699,014 97
Main lines and distribution pipes.....	2,717,611 60
Real estate in Pawtuxet and Lincoln.....	15,975 00
Tools and supplies.....	35,113 01
	<hr/> \$3,932,063 03

Bills deposited with the city treasurer  
for collection from July 1 to September 30,  
1905, inclusive, amounted to . . . \$88,886 21

As follows :

Water.....	\$80,644 08	
Water meters.....	4,437 00	
Setting and repairing meters.....	2,273 04	
Labor and material, laying services, etc.....	1,361 59	
Rent of real estate.....	100 50	
Penalties.....	50 00	
Permanently closing service stops.....	20 00	
		\$88,886 21

During the quarter, coupons from bills  
collected have been returned by the city  
treasurer and receipted for to the amount of \$88,195 29

As follows :

Water.....	\$79,754 18	
Water meters.....	4,373 00	
Setting and repairing meters.....	2,525 34	
Labor and material, laying services, etc.....	1,342 92	
Rent of real estate.....	100 50	
Penalties.....	52 00	
Repairs on pipe line.....	27 35	
Permanently closing service stops.....	20 00	
		\$88,195 29

The amount of bills approved on account  
of water works for the fiscal year ending  
September 30, 1905, inclusive, was :

For maintenance, . . . \$387,121 54

Classified as follows :

PETTACONSET PUMPING STATION.

Allis-Chalmers high-duty engine, to furnish and erect.....	\$76,917 93
Installation of sand filtration plant at Pettaconset.	68,305 68
Laying 42-inch force main from Pettaconset to Sockanosset. ....	55,958 60
Coal and wood.....	19,697 15
Amount carried forward.....	\$220,879 36

# REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 11

Amount brought forward.....	\$220,879 36	
Sundries.....	5,049 67	
Firemen.....	3,258 30	
Engineers.....	2,905 74	
Cornish engine house.....	1,725 62	
Worthington high-duty engine.....	1,708 77	
Superintendence.....	1,624 93	
Corliss pumping engine and house.....	1,581 17	
Repairs on boilers.....	1,154 37	
Leading main from Sockanosset to city—to lay....	1,000 00	
Real estate.....	822 41	
Oil, waste and packing.....	728 33	
Labor on fuel.....	700 20	
New chimney, to furnish and erect.....	590 66	
Care of grounds.....	469 52	
Sand filtration plant, for miscellaneous supplies ..	220 36	
Barn expenses.....	208 62	
Lights.....	150 36	
Cornish pumping engine.....	16 65	
		\$244,795 04

## SOCKANOSSET RESERVOIR.

Watchman.....	\$730 00	
Sundries.....	539 26	
		\$1,269 26.

## HOPE PUMPING STATION.

Coal and wood.....	\$1,788 42	
Firemen.....	1,649 50	
Engineers.....	1,484 71	
Holly pumping engine.....	1,310 57	
Sundries.....	374 01	
Lights.....	264 60	
Repairs on boilers.....	223 39	
Nagle pumping engine.....	214 59	
Oil, waste and packing.....	24 62	
		7,334 41

## HOPE RESERVOIR.

Sundries.....	\$898 84	
Watchman.....	821 25	
		1,720 09

## FRUIT HILL RESERVOIR.

Sundries.....	\$2,308 67	
Watchman.....	811 00	
		3,119 67

Amount carried forward.....	\$258,238 47.
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Amount brought forward.....		\$258,238 67
<b>METER DEPARTMENT.</b>		
Water meters.....	\$18,936 48	
Setting and repairing meters.....	6,283 87	
		25,220 35
<b>PIPE LINE AND SERVICE STOPS.</b>		
Repairs.....	\$15,017 51	
Inspection of pipe line and services.....	4,624 71	
Superintendence — salaries.....	3,502 96	
		23,145 18
<b>PIPE YARD.</b>		
Laying water pipe.....	\$15,668 75	
Cast iron water pipe.....	13,243 56	
Fire hydrants, boxes and covers.....	7,800 52	
Laying service pipe.....	4,734 76	
Special castings.....	3,446 97	
Service pipe.....	2,535 88	
Tools.....	2,418 07	
Stop valves.....	1,955 30	
Labor on and carting pipe.....	1,935 99	
Pig lead and tin.....	1,472 17	
Taps and stops.....	1,389 01	
Pipe yard, office expenses.....	269 23	
Repairs on pipe yard buildings.....	53 59	
		56,963 80
<b>MISCELLANEOUS.</b>		
Town of Cranston tax.....	\$7,083 94	
Clerks' and inspectors' salaries.....	6,629 59	
Thawing out water pipe.....	6,438 56	
Barn expenses.....	2,612 68	
Prevention of defilement of the Pawtuxet.....	2,199 96	
Horses, wagons, harnesses, etc.....	1,596 99	
Car fares.....	540 00	
Telephone lines.....	490 72	
Town of North Providence tax.....	400 00	
Inspection of water pipe with reference to electro- lysis.....	216 90	
Public drinking fountains and troughs.....	193 96	
Sundries.....	62 21	
Real estate at Pawtuxet.....	39 73	
Real estate at Lincoln.....	27 50	
		28,534 74
		\$387,121 54

For construction, . . . . . \$33,322 61

Charged as follows :

Installation of sand filtration plant at Pettaconset, \$33,322 61



## SEWERS.

During the quarter ending September 30, 1905, three hundred and ninety-four permits were issued to drain-layers—two hundred and thirty-five for new work and one hundred and fifty-nine for extensions and repairs of drains.

Two drain-layer's licenses were issued during the quarter, making the total number one hundred and thirty-six, all of which expire December 31, 1905.

July 8th, the proposal of J. Spencer Turner Company to furnish and deliver 10,000 yards of 40-inch duck, No. 2048, for  $20\frac{1}{2}$  cents per yard, was accepted.

August 12th, the proposal of Charles Crankshaw to lay a six-inch drain from the end of sewer in Rochambeau avenue to the school house property in said avenue, for 50 cents per linear foot, was accepted.

August 29th, the proposal of Starkweather & Williams Company to furnish and deliver at Harbor Junction wharf prime green copperas in bulk, in car load lots, as required during the year 1906, for 50 cents per hundred weight, was accepted.

September 6th, a contract for the completion of the sewer in Narragansett avenue and right of way was awarded to Frederick E. Shaw, and subsequently executed. The estimated cost of same is \$4,091.87.

September 22d, contracts for the construction of the following sewers were awarded to Frederick E. Shaw and subsequently executed, namely :

[ The amounts given below are what are estimated will be paid the contractors for labor, and do not include the cost of inspection and materials.]

No. of resolution.    Date of approval.

286.	Sept. 12, 1905,	<i>Andem street, from Canton to Bergen,</i>	\$647 80
287.	" " "	<i>Grotto avenue, from Penrose to Irving,</i>	1,004 30
288.	" " "	<i>West River street, from Cross to Burke, and from West River street at Elk easterly through right of way about 530 feet to end of section 22 of the improved sewerage system.</i>	8,055 30

During the quarter, assessments for the cost of constructing sewers were certified to the city treasurer as follows:

Chalkstone avenue, from Lisbon street to River avenue.....	\$2,277 76
Alverson, Eastwood, Laurel Hill and Hartford avenues.....	23,198 34
	<hr/> \$25,476 10

During the quarter, the construction of the following sewers was completed, namely :

No. of resolution.    Date of approval.

Date of completion.

201.	June 7, 1904,	<i>Barre street, from Grove to about 1,300 feet northerly ; also westerly through right of way across tracks of N. Y., N. H. &amp; H. R. R. Company to Harris avenue.</i>	Sept. 1, 1905.
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No. of resolution.	Date of approval.	Date of completion.
67.	Feb. 7, 1905, <i>Right of way from Valley street to Woonasquatucket river.</i>	July 28, 1905.
69.	" " " <i>Elmdale avenue, Cleveland and Whitehall streets and Eastwood avenue.</i>	Aug. 26, 1905.
245.	June 20, 1905, <i>Rochambeau avenue, from the westerly line of Hope street, westerly about 425 feet to end of present sewer in Rochambeau avenue.</i>	July 21, 1905.

Work upon the following sewers, was in progress at the close of the quarter, namely :

No. of resolution.	Date of approval.
68.	Feb. 7, 1905, <i>Pleasant Valley Division, Section 31.</i>
70.	" " " <i>Narragansett avenue, from city line northerly to point 600 feet north of Roger Williams avenue, and in right of way easterly to the main trunk sewer.</i>
180.	May 5, 1905, <i>Unit street, from Chalkstone avenue to Maynard street.</i>
181.	" " " <i>Blackstone boulevard, west side, from north line of Glen avenue, southerly to present end of sewer.</i>
219.	June 6, 1905, <i>Northup avenue, from Silver Spring street to the westerly line of Edwards street.</i>

Work upon the following sewers, completing the work ordered by the city council, had not commenced September 30, 1905, namely :

No. of resolution. Date of approval.

286. Sept. 12, 1905, *Andem street, from Canton to Bergen.*  
 287. " " " *Grotto avenue, from Penrose to Irving.*  
 288. " " " *West River street, from Cross to Burke, and from West River street at Elk easterly through right of way about 530 feet to end of Section 22 of the improved sewerage system.*

The amount of bills approved on account of sewers from July 1 to September 30, 1905, inclusive, was :

For construction, . . . . . \$32,866 58

Charged as follows :

Material.....	\$6,704 19
Additional catch-basins.....	1,158 49
Testing cement.....	314 62
Sundries.....	206 15
Contract reservations.....	199 00
Tools.....	91 06
Sewer in Admiral street, from Hillwood to end of present sewer in Admiral.....	5 00
Sewer in Alverson, Eastwood, Laurel Hill and Hartford avenues.....	253 70
Sewer in Barre street, from Grove to about 1,300 feet northerly; also westerly through right of way across tracks of N. Y., N. H. and H. R. R. Company to Harris avenue.....	406 59
Sewer in Blackstone boulevard, west side, from north line of Glen avenue, southerly to present end of sewer.....	92 82
Sewer in Douglas avenue, from Farmer street to Vandewater.....	5 00
Sewer in Elmdale and Eastwood avenues, Whitehall and Cleveland streets.....	2,980 60
Sewer in Linton and Robin streets.....	7 50
Amount carried forward.....	\$12,434 72

# REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 17

Amount brought forward.....	\$12,434 72	
Sewer in Narragansett avenue and in right of way from city line to main trunk sewer.....	1,481 66	
Sewer in Northup avenue, from Silver Spring street to the westerly line of Edwards street..	1,665 17	
Sewer in Reservoir and Adelaide avenues.....	5 00	
Sewer in Reynolds avenue, Wadsworth and Grand streets.....	20 50	
Sewer in right of way, from Valley street to the Woonasquatucket river.....	1,159 09	
Sewer in Rochambeau avenue, from Hope street westerly to end of present sewer in Rocham- beau avenue.....	1,240 92	
Sewer in Thayer, Manning and Brook streets ....	58 50	
Sewer in Unit street, from Chalkstone avenue to Maynard street.....	1,869 06	
Sewer in Pleasant Valley Division, Section 31.....	12,931 96	
		\$32,866 58

For maintenance, . . . . . \$31,977 25

## Classified as follows:

Cleaning basins and sewers.....	\$7,288 02
Repairing basins and sewers.....	3,250 78
Cleaning and repairing old drains.....	1,139 80
Tools.....	784 89
Inspection of connections.....	693 08
Salary, superintendent.....	442 00
Sundries.....	417 09
Barn expenses.....	401 86
Horses, wagons, harnesses, etc.....	140 72
Office expenses.....	94 81
Cleaning private connections.....	62 80
Telephone lines.....	35 93
Car fares.....	10 00
Filling cisterns, etc.....	7 00
Repairs on gate house.....	5 40

## ERNEST STREET STATION.

Coal and wood.....	1,220 23
Engineers.....	901 07
Cleaning screens.....	768 88
Firemen.....	432 46
Cleaning and repairing pumps.....	303 29
Supplies.....	253 19

Amount carried forward..... \$18,653 30

Amount brought forward.....	\$18,653 30
Repairs on engines.....	145 06
Care of grounds.....	136 13
Repairs on boilers.....	89 88
Lights.....	19 08
Care of buildings.....	6 42

## SEWAGE PRECIPITATION TANKS.

Chemicals.....	4,731 14
Labor in sludge disposal.....	2,640 00
Miscellaneous supplies.....	2,302 01
Labor on sewage precipitation.....	1,558 95
Electrical power.....	571 50
Repairs on machinery.....	351 16
Repairs on tanks.....	357 88
Fuel.....	280 61
Lights.....	19 74
Repairs on buildings.....	9 11
	<u>\$31,977 25</u>

The *net* expenditure for construction of sewers to September 30, 1905, inclusive, was..... \$7,724,711 25

The *net* expenditure for maintenance of sewers to September 30, 1905, inclusive, was..... \$1,341,784 11

Bills deposited with the city treasurer for collection from July 1 to September 30, 1905, inclusive, amounted to . . . \$2,505 15

As follows :

Sale of old metals.....	\$639 23
Miscellaneous work.....	345 90
Cleaning private connections.....	65 50
Pumping out mine for the Rhode Island Graphite Company.....	45 00
Pumping out cellar.....	7 00
Private sewer for Queen Dyeing Company.....	1,078 04
Sewer material.....	318 52
Laying drains to curbstone.....	15 96
	<u>\$2,506 15</u>

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of . . . \$2,552 04

## As follows:

Sale of old metals.....	\$629 23
Miscellaneous work.....	361 09
Cleaning private connections.....	64 50
Pumping out mine for the Rhode Island Graphite Company.....	45 00
Sale of old filter cloth.....	30 00
Pumping out cellars.....	12 00
Private sewer for the Queen Dyeing Company.....	1,078 04
Sewer material.....	316 22
Laying drains to curbstone.....	15 96
	<hr/>
	\$2,552 04

The amount of bills approved on account of sewers for the fiscal year ending September 30, 1905, inclusive, was as follows:

For construction, . . . . . \$131,004 56

## Charged as follows:

Material.....	\$24,703 27
Additional catch-basins.....	3,425 71
Contract reservations.....	2,992 00
Sundries.....	1,825 23
Testing cement.....	1,147 08
Tools.....	120 14
Sewer in Admiral street, from Hillwood to end of present sewer in Admiral.....	1,069 42
Sewer in Alverson, Eastwood, Laurel Hill and Hartford avenues.....	21,759 68
Sewer in Barre street, from Grove to about 1,300 feet northerly, also westerly through right of way across tracks of N. Y., N. H. and H. R. R. Company to Harris avenue.....	1,002 98
Sewer in Blackstone boulevard, west side, from north line of Glen avenue, southerly to present end of sewer.....	92 82
Sewer in Douglas avenue, from Farmer street to Vandewater.....	3,543 15
Sewer in Dudley street, from junction of Pearl and Plain to Eddy, and across land of the city from Eddy street to the head of the city dock.....	514 22
Sewer in Eighth street, from a point 50 feet west of Summit avenue to North Main street.....	4,697 21
	<hr/>
Amount carried forward.....	\$66,912 91

Amount brought forward.....	\$36,912 91
Sewer in Elmdale and Eastwood avenues, Whitehall and Cleveland streets.....	3,261 69
Sewer in Everett avenue, from Arlington to Elmgrove.....	1,732 75
Sewer in Exchange place, from Exchange street to the river.....	1,570 21
Sewer in Linton and Robin streets.....	1,153 56
Sewer in Narragansett avenue and in right of way from city line to main trunk sewer.....	3,179 58
Sewer in Nebraska street, from Rugby to Eddy...	306 40
Sewer in Ninth and Pettis streets.....	177 05
Sewer in Northup avenue, from Silver Spring street to the westerly line of Edwards street..	1,665 17
Sewer in Reservoir and Adelaide avenues.....	2,067 36
Sewer in Reynolds avenue, Wadsworth and Grand streets.....	1,566 40
Sewer in right of way, from Valley street to the Woonasquatucket river.....	3,563 60
Sewer in Rochambeau avenue, from Hope street westerly to end of present sewer in Rochambeau avenue.....	1,544 16
Sewer in Tanner, Laban and Conanicut streets....	103 76
Sewer in Thayer, Manning and Brook streets.....	17,380 56
Sewer in Unit street, from Chalkstone avenue to Maynard street.....	1,869 06
Sewer in Veazie street, from near Douglas avenue to Branch.....	3,759 65
Sewer in Pleasant Valley Division, Section 31.....	18,788 69
	<hr/>
	\$131,004 56

For maintenance, . . . . . \$116,911 40

Classified as follows :

Cleaning basins and sewers.....	\$26,078 37
Repairing basins and sewers.....	11,651 39
Cleaning and repairing old drains.....	4,187 85
Inspection of connections .....	2,710 22
Tools.....	2,292 86
Salary, superintendent.....	1,772 86
Barn expenses.....	1,704 26
Horses, wagons, harnesses, etc.....	1,294 74
Sundries.....	1,291 55
Use of water.....	900 00
Office expenses.....	259 44

Amount carried forward..... \$51,143 54



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Amount brought forward.....	\$54,143 54
Cleaning private connections.....	190 80
Telephone lines.....	143 72
Car fares.....	50 00
Filling cisterns, etc.....	12 00
Repairs on buildings, sewer maintenance yard....	9 53
Repairs on gate house.....	5 40

## ERNEST STREET STATION.

Coal and wood.....	4,988 01
Engineers.....	3,248 21
Cleaning screens.....	2,621 64
Firemen.....	1,692 25
Cleaning and repairing pumps.....	1,500 42
Repairs on engines.....	1,483 90
Supplies.....	999 78
Repairs on boilers.....	595 04
Care of grounds.....	377 26
Repairs on buildings.....	125 78
Lights.....	103 08
Care of buildings.....	82 87

## SEWAGE PRECIPITATION TANKS.

Chemicals.....	19,893 29
Labor in sludge disposal.....	9,635 61
Labor on sewage precipitation.....	5,723 52
Miscellaneous supplies.....	4,832 04
Electrical power.....	2,211 25
Fuel.....	693 47
Repairs on machinery.....	554 60
Repairs on tanks.....	481 67
Repairs on buildings.....	392 24
Lights.....	120 48
	<hr/>
	\$116,911 40

### HIGHWAYS.

July 1st, the proposal of the Norcross Brothers Company to furnish and deliver at the city yard 15,000 granite blocks at \$54.00 per thousand, was accepted.

July 21st, the proposal of the Connecticut Trap Rock Quarries to furnish and deliver at the city yard 3,000 tons of crushed stone at \$1.20 per ton, was accepted and the order subsequently extended to 7,000 tons.

July 28th, the proposal of Smith Granite Company to furnish and deliver at the city yard 7,500 granite blocks at \$1.50 per square yard, was accepted.

August 8th, a schedule of unpaid curbing bills amounting to \$7,962.52 was certified to the assessors of taxes for collection.

August 12th, the proposal of Gaetano Cardarelli to furnish and deliver paving blocks at the city yard for \$1.25 per square yard, was accepted.

September 27th, the proposal of Crabtree and Havey to furnish and deliver at the city yard two cargoes of curbing at 55 cents per linear foot, was accepted.

During the quarter the following work was completed:

#### SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.

Oct. 20, 1904, *Grand street, from Pottery avenue to Huntington.*

Feb. 16, 1905, *Elmdale avenue, from Whitehall street to Webster avenue.*

Date of order.

Mch. 16, 1905, *Whitehall street, from Wallace to Union avenue.*

“ “ “ *Moulton street, from Westminster to Bewet.*

April 20, 1905, *Reynolds avenue, from Prairie to Burnside street.*

“ “ “ *Linton street, from Academy avenue to Canton street.*

“ “ “ *Robin street, from Berkeley to Regent avenue.*

May 18, 1905, *Eastwood avenue, from Ralph street to Laurel Hill avenue.*

“ “ “ *Cleveland street, from its easterly termination to Laurel Hill avenue.*

“ “ “ *Wadsworth street, from Sorrento to Cranston.*

The following work was in progress September 30, 1905:

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.

June 16, 1904, *Barre street, from Ridge to Bell.*

“ “ “ *Bell street, from Barre to Eden.*

REMOVE OBSTRUCTIONS, GRADE AND PUT IN GOOD  
CONDITION.

May 18, 1905, *Hope street, from Rochambeau avenue to city line.*

The following work, ordered by the board of aldermen and city council, had not commenced September 30, 1905, namely:

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.

May 18, 1905, *Narragansett avenue, from the city line northerly to a point about 120 feet north of Ardoene street.*

## Date of order.

Sept. 21, 1905, *Spencer street, from Almy to Harkness.*  
 " " " *Unit street, from Chalkstone avenue to May-*  
*nard street.*

## PAVE WITH GRANITE BLOCKS.

May 5, 1905, *Sabin street, from West Exchange to Aborn*

REMOVE OBSTRUCTIONS, GRADE AND PUT IN GOOD  
CONDITION.

Sept. 21, 1905, *Admiral street, from Douglas avenue to*  
*Hillwood street.*

Bills approved on account of highways  
 from July 1 to September 30, 1905, inclu-  
 sive, amounted to . . . . . \$112,325 83

## Classified as follows:

Cleaning streets.....	\$22,183 79	
Repairs on unpaved streets.....	20,307 97	
Crushed stone—material and labor.....	17,665 42	
Stone—paving and crosswalk.....	7,154 80	
Repairs on paved streets.....	5,742 71	
Blacksmith and wheelwright shop.....	2,775 36	
Barn expenses.....	2,343 56	
Watering streets.....	1,972 90	
Horses, wagons, harnesses, etc.....	1,046 02	
Steam rollers—repairs and supplies.....	1,042 67	
Labor on material.....	826 52	
Repairs on stone crushers.....	769 35	
Tools, implements, etc.....	716 01	
Superintendent's salary.....	476 00	
Watchman at city yard.....	168 00	
Office expenses, city yard.....	125 34	
Building driveways, etc.....	111 33	
Fencing streets—material and labor.....	79 50	
Sundries.....	77 56	
Car fares.....	35 00	
Telephone lines.....	5 60	
Repairs on buildings, highway yard.....	98	
		\$85,726 79
Amount carried forward.....		\$85,726 79

# REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 25

Amount brought forward..... \$85,728 79

## NEW WORK — BUILDING AND REBUILD- ING STREETS, ETC.

### SIDEWALKS CURBED AND GUTTERS PAVED.

<i>Cleveland street</i> , from its easterly termination to Laurel Hill avenue.....	\$892 36	
<i>Eastwood avenue</i> , from Ralph street to Laurel Hill avenue.....	1,434 89	
<i>Elmdale avenue</i> , from Whitehall street to Webster avenue.....	2,185 90	
<i>Everett avenue</i> , from Arlington to Elmgrove.....	54 30	
<i>Grand street</i> , from Potter avenue to Huntington...	793 71	
<i>Laban street</i> , from Laurel Hill avenue to Merino street.....	81 74	
<i>Linton street</i> , from Academy avenue to Canton street.....	147 00	
<i>Moulton street</i> , from Westminster to Bewet.....	1,011 03	
<i>Reynolds avenue</i> , from Prairie to Burnside street...	1,189 87	
<i>Robin street</i> , from Berkley to Regent avenue.....	3 00	
<i>Wadsworth street</i> , from Sorrento to Cranston.....	1,244 86	
<i>Whitehall street</i> , from Wallace to Union avenue...	2,230 98	
		11,269 64

### PAVE WITH ASPHALT.

*Wyeth street*, from South Main to South Water..... 9 45

### GRADE AND PUT IN SAFE CONDITION.

*Charles street*, from Hagan to the city line..... 10 00

### REMOVE OBSTRUCTIONS, GRADE AND PUT IN GOOD CONDITION.

<i>Admiral street</i> , from Douglas avenue to Hillwood street.....	\$534 04	
<i>Lope street</i> , from Rochambeau avenue to the city line.....	14,773 91	
		15,307 95
		\$112,325 83

Bills deposited with the city treasurer  
for collection from July 1 to September 30,  
1905, inclusive, amounted to . . . \$5,517 48

## As follows :

Labor and material.....	\$4,346 58
Blacksmith and harness work for other departments.....	673 15
Boarding horses for other departments.....	182 72
Street sweepings.....	152 00
Building driveways, etc.....	79 93
Manure from barn.....	70 00
Discharging cargo at city wharf.....	7 50
Empty oil barrels.....	5 60
	<hr/>
	\$5,517 48

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$5,479 36

## As follows :

Labor and material.....	\$4,302 61
Blacksmith and harness work for other departments.....	571 20
Building driveways, etc.....	191 05
Boarding horses for other departments.....	182 72
Street sweepings.....	138 75
Manure from barn.....	70 00
Use of steam roller.....	15 53
Discharging cargo at city wharf.....	7 50
	<hr/>
	\$5,479 36

Bills approved on account of highways for the fiscal year ending September 30, 1905, inclusive, amounted to :

Regular appropriation, . . . . . \$330,504 82

## Classified as follows :

Cleaning streets.....	\$64,697 90
Repairs on unpaved streets.....	61,904 48
Crushed stone — material and labor.....	55,261 05
Removing snow and ice.....	19,114 42
Stone — paving and crosswalk.....	14,959 41
Repairs on paved streets.....	14,575 21
Blacksmith and wheelwright shop.....	12,080 87
Barn expenses.....	10,194 01
	<hr/>
Amount carried forward.....	\$252,787 44

# REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 27

Amount brought forward.....	\$232,787 44	
Repairs on stone crushers.....	6,474 54	
Steam rollers — repairs and supplies.....	5,544 03	
Labor on material.....	4,517 55	
Tools, implements, etc.....	3,573 42	
Watering streets.....	3,284 04	
Horses, wagons, harnesses, etc.....	3,236 34	
Superintendent's salary.....	1,772 86	
Repairs on buildings, highway yard.....	683 38	
Watchman at city yard.....	626 11	
Building driveways, etc.....	502 06	
Sundries.....	380 17	
Office expenses, city yard.....	283 93	
Fencing streets — material and labor.....	223 88	
Car fares.....	110 00	
Telephone lines.....	22 15	
		\$284,021 90-

## NEW WORK — BUILDING AND REBUILD- ING STREETS, ETC.

### SIDEWALKS CURBED AND GUTTERS PAVED.

<i>Algonquin street</i> , from Crescent to Reservoir avenue	\$44 69	
<i>Cleveland street</i> , from its easterly termination to Laurel Hill avenue.....	892 36	
<i>Eastwood avenue</i> , from Laurel Hill to Merino street	1,287 02	
<i>Eastwood avenue</i> , from Ralph street to Laurel Hill avenue.....	1,434 89	
<i>Elmdale avenue</i> , from Whitehall street to Webster avenue.....	2,287 60	
<i>Everett avenue</i> , from Arlington to Elmgrove....	3,372 51	
<i>Grand street</i> , from Potter avenue to Huntington...	1,539 09	
<i>Laban street</i> , from Laurel Hill avenue to Merino street.....	1,769 02	
<i>Linton street</i> , from Academy avenue to Canton street.....	1,275 36	
<i>Moulton street</i> , from Westminster to Bewet.....	1,011 03	
<i>Nebraska street</i> , from Eddy to Rugby.....	817 86	
<i>Ninth street</i> , from North Main to Highland avenue	1,541 77	
<i>Reservoir avenue</i> , west side, from Algonquin street to Crescent.....	1,338 90	
<i>Reynolds avenue</i> , from Prairie to Burnside street..	1,341 57	
<i>Robin street</i> , from Berkley to Regent avenue.....	1,001 26	
<i>Rosedale street</i> , from Messer to Ellery.....	212 09	
<i>Tiber street</i> , from Ridge to Swiss.....	393 24	
<i>University avenue</i> , from Elmgrove to Slater.....	375 34	
<i>Wadsworth street</i> , from Sorrento to Cranston.....	1,244 86	
<i>Whitehall street</i> , from Wallace to Union avenue...	2,230 98	
		25,411 44
Amount carried forward.....		\$309,433 34

Amount brought forward.....		\$309,433 34
PAVE WITH GRANITE BLOCKS.		
<i>Federal street</i> , from Broadway to Bradford street..		2,913 38
PAVE WITH ASPHALT.		
<i>Wyeth street</i> , from South Main to South Water.....		337 42
GRADE AND PUT IN SAFE CONDITION.		
<i>Charles street</i> , from Hagan to city line.....		3,354 38
REMOVE OBSTRUCTIONS, GRADE AND PUT IN GOOD CONDITION.		
<i>Admiral street</i> , from Douglas avenue to Hillwood street.....	\$534 04	
<i>Hope street</i> , from Rochambeau avenue to city line.	14,931 86	15,465 90
		<u>\$330,504 82</u>

### SIDEWALKS AND CURBING.

Bills approved on account of sidewalks and curbing from July 1 to September 30, 1905, inclusive, amounted to . . . \$4,302 99

Charged as follows :

Granite curbing.....	\$2,161 63
Concreting sidewalks.....	1,272 16
Repairing sidewalks and gutters.....	869 00
	<u>\$4,302 99</u>

Bills deposited with the city treasurer for collection from July 1 to September 30, 1905, inclusive, amounted to . . . \$632 14

As follows :

Granite curbing.....	\$493 11
Repairing sidewalks and gutters.....	83 28
Concreting sidewalks.....	55 75
	<u>\$632 14</u>



During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$967 39

As follows:

Curbing bills.....	\$546 71
Granite curbing.....	312 47
Concreting sidewalks.....	19 28
Repairing sidewalks and gutters.....	8 93
	<hr/>
	\$967 39

Bills approved on account of sidewalks and curbing for the fiscal year ending September 30, 1905, inclusive, amounted to \$15,742 48

Charged as follows:

Granite curbing.....	\$6,670 41
Concreting sidewalks.....	5,316 43
Repairing sidewalks and gutters.....	3,755 64
	<hr/>
	\$15,742 48

### CITY ENGINEER.

Bills approved on account of the city engineer's department from July 1 to September 30, 1905, inclusive, amounted to \$12,326 71

Charged as follows:

Salary — city engineer.....	\$1,125 00
Salaries of assistants.....	9,623 26
Salaries of clerks.....	789 75
Car fares.....	502 95
Supplies — drawing material, etc.....	248 98
Telephone lines.....	25 70
Instruments and repairs.....	6 22
Sundries.....	4 85
	<hr/>
	\$12,326 71

Bills approved for account of city engineer's department, for the fiscal year ending September 30, 1905, inclusive, amounted to . . . . . \$49,953 68

Charged as follows:

Salary—city engineer.....	\$4,500 00
Salaries of assistants.....	40,434 96
Salaries of clerks.....	3,177 68
Car fares.....	910 50
Supplies—drawing material, etc.....	764 91
Telephone lines.....	97 86
Instruments and repairs.....	56 22
Sundries.....	11 50
Meteorological instruments and repairs.....	05
	<hr/>
	\$49,953 68

BRIDGES.

July 12th, the proposal of Tank and McKinnon Construction Company to change and construct abutment walls and piers of Point street bridge, was accepted and a contract subsequently executed. Estimated amount of contract, \$61,543.00.

Bills approved on account of bridges from July 1 to September 30, 1905, inclusive, amounted to . . . . . \$5,366 11

Charged as follows:

Acorn street bridge.....	\$48 20
Barn expenses.....	98 86
Building at city yard.....	11 10
Burnside bridge.....	37 27
Car fares.....	25 00
Crawford street bridge.....	14 62
	<hr/>
Amount carried forward.....	\$235 05

Amount brought forward.....	\$235 05
Francis street bridge.....	70 62
Jaspee street bridge.....	20 15
Geneva bridge.....	5 51
Horses, wagons, harnesses, etc.....	9 87
Lumber, hardware, etc.....	264 59
Manton bridge.....	24 00
Manton avenue bridge.....	2 75
Merino bridge.....	13 75
Park street bridge.....	84 66
Point street bridge.....	951 81
Promenade street bridge.....	74 31
Red bridge.....	343 81
Rent of keeper's house— Washington bridge.....	36 00
Repairs on city wharf.....	67 98
Salaries — Point street bridge.....	1,083 50
Salaries — Red bridge.....	570 50
Salaries — Washington bridge.....	553 00
Sundries.....	186 12
Telephone lines.....	2 68
Tools.....	95 76
Washington bridge.....	625 36
Weybosset bridge.....	44 33
	<hr/>
	\$5,366 11

Bills deposited with the city treasurer  
for collection from July 1 to September 30,  
1905, inclusive, amounted to . . . \$26 53

As follows :

Sale of old lumber.....	\$12 25
Use of sounding rod, etc.....	11 50
Miscellaneous work.....	2 78
	<hr/>
	\$26 53

During the quarter, coupons from bills  
collected have been returned by the city  
treasurer and receipted for to the amount of \$23 75

As follows :

Sale of old lumber.....	\$12 25
Use of sounding rod, etc.....	11 50
	<hr/>
	\$23 75

Bills approved on account of bridges for the fiscal year ending September 30, 1905, inclusive, amounted to . . . \$27,447 25

Charged as follows:

Acorn street bridge.....	\$73 08
Barn expenses.....	423 81
Branch avenue bridge.....	28 80
Building at city yard.....	12 18
Burnside bridge.....	37 27
Car fares.....	50 00
Contract reservation.....	70 00
Charles street railroad bridge.....	506 78
Crawford street bridge.....	87 84
<b>Culvert across Allens avenue at Burgess cove— to build.....</b>	<b>746 79</b>
<b>Eagle street bridge.....</b>	<b>2 11</b>
<b>Exchange bridge.....</b>	<b>8 80</b>
<b>Francis street bridge.....</b>	<b>70 62</b>
<b>Gaspee street bridge.....</b>	<b>261 14</b>
<b>Geneva bridge.....</b>	<b>5 51</b>
<b>Horses, wagons, harnesses, etc.....</b>	<b>76 55</b>
<b>Lumber, hardware, etc.....</b>	<b>1,192 33</b>
<b>Manton bridge.....</b>	<b>27 59</b>
<b>Manton avenue bridge.....</b>	<b>94 94</b>
<b>Merino bridge.....</b>	<b>14 75</b>
<b>Mill street bridge.....</b>	<b>2 40</b>
<b>Park street bridge.....</b>	<b>90 86</b>
<b>Point street bridge.....</b>	<b>1,976 30</b>
<b>Promenade street bridge.....</b>	<b>74 31</b>
<b>Randall street bridge.....</b>	<b>35 06</b>
<b>Red bridge.....</b>	<b>1,156 78</b>
<b>Rent of keeper's house—Washington bridge.....</b>	<b>144 00</b>
<b>Repairs on city wharf.....</b>	<b>8,395 91</b>
<b>Salaries—Point street bridge.....</b>	<b>3,974 75</b>
<b>Salaries—Red bridge.....</b>	<b>2,095 14</b>
<b>Salaries—Washington bridge.....</b>	<b>2,108 64</b>
<b>Smith street bridge.....</b>	<b>3 04</b>
<b>Smithfield avenue bridge.....</b>	<b>25 00</b>
<b>Sundries.....</b>	<b>819 20</b>
<b>Telephone lines.....</b>	<b>10 72</b>
<b>Tools.....</b>	<b>439 85</b>
<b>Washington bridge.....</b>	<b>1,198 18</b>
<b>Washington row bridge.....</b>	<b>356 94</b>
<b>Weybosset bridge.....</b>	<b>748 70</b>

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\$27,447 25

Bills approved for account of building the river walls between the Burnside and Exchange bridges from July 1 to September 30, 1905, inclusive, have been paid from the special appropriation for that work, to the amount of . . . . . \$521 71

Bills approved for account of building the river walls between the Burnside and Exchange bridges for the fiscal year ending September 30, 1905, inclusive, amounted to \$50,960 19

Bills approved for account of rebuilding abutments and piers, Point street bridge, from July 1 to September 30, 1905, inclusive, have been paid from the special appropriation for that work, to the amount of . . . \$128 13

Bills approved for account of rebuilding abutments and piers, Point street bridge, for the fiscal year ending September 30, 1905, inclusive, amounted to . . . \$224 50

### PUBLIC LIGHTS.

Bills approved on account of the public lights from July 1 to September 30, 1905, inclusive, amounted to . . . . . \$71,034 58

#### Charged as follows:

Arc lights.....	\$51,851 97
Incandescent lights.....	12,723 66
Welsbach lights.....	6,353 95
Salaries .....	205 00
	<hr/>
	\$71,034 58

Bills deposited with the city treasurer for collection (for one common lantern and frame), from July 1 to September 30, 1905, inclusive, amounted to . . . . . \$2 00

During the quarter, coupons from bills collected (for one common lantern and frame), have been returned by the city treasurer and receipted for to the amount of \$2 00

Bills approved on account of the public lights for the fiscal year ending September 30, 1905, inclusive, amounted to . . . \$281,870 78

Charged as follows:

Arc lights.....	\$205,589 13
Incandescent lights.....	50,834 67
Welsbach lights.....	24,654 84
Salaries.....	792 14
	<hr/>
	\$281,870 78

PUBLIC WORKS OFFICE.

Bills approved on account of the public works office from July 1 to September 30, 1905, inclusive, amounted to . . . . . \$5,033 6

Charged as follows:

Salaries of commissioner and secretary .....	\$1,850 00
Salaries of office assistants.....	3,009 26
Office supplies .....	154 43
Telephone lines.....	19 95
	<hr/>
	\$5,033 64

Bills approved on account of the public works office for the fiscal year ending September 30, 1905, inclusive, amounted to \$20,843 20

Charged as follows :

Salaries of commissioner and secretary.....	\$7,400 00
Salary of office assistants.....	12,658 35
Office supplies.....	708 76
Telephone lines.....	76 09
	<hr/>
	\$20,843 20

ABOLISHING GRADE CROSSING AT GROVE STREET, Etc.

Bills approved for account of building retaining walls, etc., on Barre street, from July 1 to September 30, 1905, inclusive, have been paid from the special appropriation for that work, to the amount of \$14,104 82

Bills approved for account of building retaining walls, etc., Barre street, for the fiscal year ending September 30, 1905, inclusive, amounted to \$47,280 99

WALTER F. SLADE,  
*Commissioner.*





CITY

DOCUMENT

[No. 4]

NINETY-SECOND  
QUARTERLY REPORT

OF THE

Department of Public Works

OF THE

CITY OF PROVIDENCE, R. I.

QUARTER ENDING DECEMBER 31, 1905.



PRINTED BY THE  
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PROVIDENCE, R. I.

1906.]

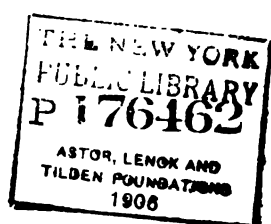
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QUARTER ENDING DECEMBER 31, 1905



The Providence Press:  
SNOW & FARNHAM, CITY PRINTERS,  
63 Washington Street.  
1906.



# REPORT.

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OFFICE OF THE DEPARTMENT OF PUBLIC WORKS, }  
CITY HALL, PROVIDENCE, R. I., January 2, 1906. }

TO THE HONORABLE THE CITY COUNCIL:

In compliance with the requirements of Chapter 41 of the ordinances, the Commissioner of Public Works respectfully presents the ninety-second quarterly report of the expenditures by the several departments under his direction and control, with statements of work ordered and the condition and cost of same, for the quarter ending December 31, 1905.

## WATER WORKS.

October 27th, the proposal of Charles S. Bush Company to furnish and deliver, f. o. b. Providence, the laboratory apparatus and chemicals for the filtration plant at Pettaconset for the sum of \$576.94, was accepted.

November 9th, the proposal of Frederick E. Shaw to excavate and grade along the line of the new 42-inch leading main between Reservoir and Park avenues in Cranston, for the sum of 23 cents per cubic yard measured in excavation, was accepted and a contract subsequently executed.

November 10th, the proposal of J. W. Hunt and Company to furnish and install in the laboratory building at Pet-

taconset a hot water heating apparatus with the necessary piping and radiators for the sum of \$200.00, was accepted.

The proposal of the General Fire Extinguisher Company to furnish and install a hot water heating apparatus in the pump house of the filtration plant at Pettaconset for the sum of \$713.00, was accepted.

November 16th, the proposal of the Warren Foundry and Machine Company to furnish and deliver at the city yard 6,803 gross tons of cast iron water pipe at \$26.40 per ton of 2,000 pounds, was accepted and a contract subsequently executed. Amount, \$201,151.11.

November 27th, the proposal of A. S. Corr, of Phillipsburg, N. J., to inspect 6,803 tons of water pipe at the foundry of the Warren Foundry and Machine Company for the sum of \$680.30, was accepted.

November 29th, the proposal of John W. Lyon to furnish and deliver the taps and stops required during the year 1906, was accepted and a contract subsequently executed. Amount, \$1,804.65.

December 14th, the proposal of Fuller Iron Works to furnish and deliver at the city yard the special castings required during the year 1906, also to deliver along the line of the work the specials for the 42-inch leading main, was accepted and a contract executed. Amount, \$10,625.00.

The following proposals for furnishing and delivering water gates and hydrants at the city yard were accepted and contracts subsequently executed, namely :

Coffin Valve Company for 8 42-inch, 1 30-inch, 1 24-inch, 100 6-inch, and 12 4-inch water gates: amount, \$7,340.50. The Fairbanks Company for 3 16-inch, 10 12-inch, and 60 8-inch water gates: amount, \$1,487.00.

Ludlow Valve Manufacturing Company for 20 6-inch post hydrants with gates.

Amount, \$1,198.00.

December 21st, the proposal of Charles S. Bush Company to furnish and install at Pettaconset a Couch & Seeley intercommunicating telephone system for the sum of \$723.00, was accepted.

The average daily consumption of water during the last quarter was 14,436,427 gallons, and the average daily consumption for the year 1905 was 14,513,029 gallons.

Water pipes were laid during the quarter as follows :

8-INCH.

In Admiral street; Arlington and Kinsley avenues; in Smith street and River avenue in the town of North Providence.....	1,633.78 feet.
---	----------------

6-INCH.

In Saxon court; Abram, Blundell, Fourth, Grandview, Ivy, Merino, Portland, Seamans, Waverly, Whitehall, West streets; Arlington, Clarendon, Cole, Lincoln and Sims avenues; in Selkirk and Windsor roads; Clarence, Fairview, Fenner, Governor, Gordon streets; Bayview, Fletcher and Grand avenues in the town of Cranston; and in Binghampton avenue in the town of Johnston.....	5,160.02 feet.
Total.....	6,793.80 feet.

or 1.286 + miles.

Water pipes were removed during the quarter as follows :

From Laurel street.....	34.30 feet.
-------------------------	-------------

or .006+ mile.

Statement of sizes and lengths of pipe laid since the commencement of the work :

42-inch .....	4,979.49 feet.
36-inch .....	10,207.57 feet.
30-inch .....	61,328.30 feet.
24-inch .....	43,293.86 feet.
20-inch .....	9,626.59 feet.
16-inch .....	33,812.95 feet.
12-inch .....	110,835.37 feet.
10-inch .....	15,057.14 feet.
8-inch .....	295,639.93 feet.
6-inch .....	1,265,754.34 feet.
Total.....	1,850,535.54 feet.

or, 350.480 + miles.

Statement of sizes and lengths of pipe laid for the special water service for fire protection since the commencement of the work :

24-inch .....	4,397.45 feet
16-inch .....	22,004.37 feet
12-inch .....	2,315.76 feet
Total. ....	29,517.58 feet

or, 5.59 + miles.

Eight fire hydrants have been set during the quarter, one in each of the following locations :

Clarence street, Cranston, northeast corner of Richards street.  
 Cole avenue, east side, 2 feet south of line of Clarendon avenue.  
 Gordon avenue, north side, 26 feet east of Marlborough avenue.  
 Hart street, north side, 1 foot east of east building line of Ivy street.  
 Kinsley avenue, south side, 318 feet east of Eagle street.  
 Sassafras street, north side, on west line of Savings street.  
 Selkirk road, east side, 65.5 feet north of Stratford road.  
 Waverly street, east side, 160.5 feet south of Union avenue.

The total number of fire hydrants, exclusive of those for special service for fire protection, is now two thousand and sixty-one — nineteen hundred and forty-nine flush, and one hundred and twelve post.

The total number of fire hydrants on the special water service for fire protection is ninety-two.

During the quarter, two hundred and sixty-two water meters were set, of which number forty-five were to replace other meters. The use of nine meters was discontinued.

The following meters were in use at the close of the quarter :

KIND.	Size.									Total.
	$\frac{1}{8}$ -in.	$\frac{1}{4}$ -in.	1-in.	1 $\frac{1}{4}$ -in.	2-in.	3-in.	4-in.	6-in.	8-in.	
Ball & Fitts.....	1,867	389	91	10	4					2,361
Ball & Fitts, rotary.....			4	6		2	1			13
Crown.....	9,702	1,194	356	153	48	30	26	1		11,510
Empire.....	1,340	168	71	48	15	1	1			1,644
Fales, Jenks & Sons.....			1							1
Gem.....					15	20	18	3		65
Hersey.....	24									24
Nash.....	179									179
Thomson.....	4,667	423	74	54	22	7	7	2		5,256
Trident.....	103		1							104
Venturi.....									1	1
	17,882	2,174	598	271	104	69	53	6	1	21,158

Three plumbers' licenses were issued during the quarter, making the total number one hundred and twenty-three, all of which expired December 31, 1905.

Eight hundred and seven permits to do plumbing work were issued during the quarter.

One hundred and seventy-three applications for water were made during the quarter, making the total number twenty-seven thousand three hundred and sixty-seven.

The number of new service stops opened during the quarter was one hundred and seventy-two.

The total number of service stops opened to December 31, 1905, inclusive, was twenty-six thousand six hundred and eighty. The number in actual use December 31, 1905, was twenty-four thousand four hundred and eighty-two.



The following is a list of sprinkler hydrants for car sprinklers, namely :

Angell street, south side, 90 feet east of Wayland avenue, in sidewalk.  
 Bassett street, northwest side, 105½ feet southwest of Hoppin.  
 Branch avenue, south side, 316 feet west of Woodward road, in sidewalk.  
 Camp street, east side, 125 feet north of Olney, in sidewalk.  
 Chalkstone avenue, northeast corner of Fallon, in sidewalk.  
 Dexter street, west side, 18 feet south of Cranston, in sidewalk.  
 Earl street, south side, 71½ feet east of Bucklin.  
 Eddy street, west side, at Richmond, in street.  
 Eddy street, west side, 5 feet south of north line of Washington avenue, in street.  
 Edna street, west side, 16 feet north of south line of car-house.  
 Elmwood avenue, east side, 85 feet south of Thackeray street.  
 Hope street, east side, 125 feet north of Barnes, in street.  
 Manton avenue, west side, 150 feet south of fire station, in sidewalk.  
 Market square, north side, 24 feet east of Canal street, in street.  
 North Main street, west side, 182 feet north of White, in street.  
 North Main street, west side, 17 feet north of Livingstone, in street.  
 Orms street, south side, 23 feet east of Windsor, in sidewalk.  
 Randall square, east side, 32 feet north of Randall street, in street.  
 Richmond street, southwest side, 44 feet southeast of Pine, in sidewalk.  
 Silver Spring street, north side, 61 feet east of Charles.  
 Smith street, southwest side, 360 feet southeast of Hilltop avenue, in sidewalk.  
 Thurbers avenue, south side, 208 feet east of Broad street, in sidewalk.  
 Wickenden street, south side, 167 feet west of Brook, in street.  
 Winter street, east side, 187 feet south of Pond, in sidewalk.

The following is a list of street sprinklers ready for use on the Providence water works, viz. :

Aborn street, near junction of Atwells avenue.  
 America street, near Atwells avenue.  
 Barton street, corner of Broadway.  
 Bradford street, near Broadway.  
 Branch avenue, near junction of North Main street.  
 Benefit street, foot of Angell.  
 Benefit street, between North Main and Halsey.  
 Beacon avenue, near Friendship street.  
 Broad street, near Gallup.  
 Broadway, north side, west of Harris avenue.  
 Camp street, between Cypress and Larch.  
 Coddling street, near Westminster.  
 Cranston street, east side of railroad bridge.  
 Crary street, between Eddy and Hospital.  
 Cromwell street, near Dexter.  
 Daniel avenue, near Plainfield street.  
 Dexter street, opposite Division.

Doyle avenue, near Hope street.  
Doyle avenue, near North Main street.  
Exchange place, west end.  
Ford street, west of Cranston.  
Garnet street, near Pine.  
Governor street, near Waterman.  
Greenwich street, corner Elmwood avenue.  
Harris avenue, near Atwells.  
Hope street, junction of Thayer.  
Hope street, corner of Wickenden.  
John street, corner of Benefit.  
Knight street, corner of Grove.  
Laurel Hill avenue, near Plainfield street.  
Linden street, near Broad.  
Manning street, near Brook.  
Medway street, east of Wayland avenue.  
Melrose street, near south corner of burying ground.  
Moore street, corner of Broad.  
Morris avenue, north of Olney street.  
North Main street, corner of Thomas.  
North Main street, near Mill.  
Olive street, east of Prospect.  
Olney street, near Camp.  
Orms street, near Ormsbee avenue.  
Oxford street, corner of Eddy.  
Pocasset avenue, near Plainfield street.  
Power street, west of Hope.  
Promenade street, west of Gaspee.  
Promenade street, west of Holden.  
Promenade street, west of Steeple.  
Prospect street, corner of Bowen.  
Public street, about 200 feet east of Temple.  
Reservoir avenue, opposite Atlantic.  
Roger Williams park, near Broad street (private).  
Salem street, between Potters avenue and Benedict street.  
Smith street, near Oakland avenue.  
Smith street, near Schaffer.  
Smithfield avenue, north of Branch.  
Smithfield avenue, north of the Moshassuck river.  
Transit street, between South Water and South Main.  
Traverse street, corner of Pike.  
Washington street, corner of Dean.  
Webster avenue, north of Progress.  
West Friendship street, near Broad.  
Weybosset street, opposite Abbott park place.  
Willard avenue, west of Prairie.  
Willow street, west of Messer.  
Winter street, near Pond.  
Woodland street, near Holden.



The following table shows the lengths, sizes, etc., of services laid during the year ending December 31, 1905:

MONTHS.	LENGTH OF SERVICES IN FEET.					Total Length of Trenching.	Total Length of Paving.	NUMBER AND SIZE OF TAPS USED.										NUMBER AND SIZE OF STOPS USED.	Service Boxes Used.	
	SIZE OF PIPE.							Totals.	1/2 in.	3/4 in.	1 in.	1 1/2 in.	To- tal.	1/2 in.	3/4 in.	1 in.	1 1/2 in.			To- tal.
	3/4 in.	1 in.	1 1/2 in.	1 3/4 in.	2 in.															
January.....	99.2	.....	.....	.....	.....	99.2	104.	13.	6	.....	.....	.....	.....	6	6	.....	.....	6	6	
February.....	8.2	.....	.....	.....	8.2	16.4	18.	3.	1	.....	1	.....	.....	2	1	.....	1	.....	2	
March.....	89.8	24.6	.....	.....	.....	114.4	122.	18.	6	3	.....	.....	.....	9	6	3	.....	.....	9	
April.....	1,228.5	167.0	34.4	10.2	.....	1,440.1	1,514.	159.5	71	14	2	2	2	89	78	12	2	1	93	
May.....	1,587.5	79.0	28.8	42.2	.....	1,737.1	1,827.	303.	92	6	2	3	3	103	98	5	2	3	108	
June.....	1,050.8	112.8	.....	37.2	.....	1,200.8	1,257.	127.5	59	10	.....	1	70	60	9	.....	1	70	71	
July.....	695.3	28.4	35.4	.....	.....	759.1	801.5	103.	47	3	2	.....	52	48	2	2	.....	52	53	
August.....	919.6	26.4	.....	.....	.....	946.0	1,001.	153.	63	2	1	1	67	65	2	.....	.....	67	69	
September.....	689.9	61.6	.....	.....	.....	751.5	787.5	91.	38	4	1	.....	43	42	3	.....	.....	45	47	
October.....	1,040.8	28.4	26.2	44.2	.....	1,139.6	1,193.	129.	61	2	1	2	66	61	2	1	2	66	66	
November.....	1,208.1	64.7	8.2	10.6	.....	1,291.0	1,353.5	128.	66	7	3	1	77	70	6	1	1	78	81	
December.....	463.2	16.2	.....	.....	.....	480.0	504.	83.	26	1	.....	.....	27	28	1	.....	.....	29	29	
Totals.....	9,081.5	669.1	140.8	143.8	.....	9,975.2	10,482.5	1,302.0	536	52	13	10	611	563	45	9	8	625	638	

Changes in size and location of services in 1905:

TAPS AND STOPS.										SIZES AND LENGTHS OF LEAD PIPE.										Trenching.	Paving.	Change in location only.	Change in both size and location.	Relaid.	
TAKEN OUT.					INSERTED.					TAKEN OUT.					INSERTED.										
1/2 inch.	3/4 inch.	1 inch.	1 1/4 inch.	1 1/2 inch.	2 inch.	2 1/2 inch.	3 inch.	3 1/2 inch.	4 inch.	1 inch.	1 1/4 inch.	1 1/2 inch.	2 inch.	2 1/2 inch.	3 inch.	3 1/2 inch.	4 inch.	4 1/2 inch.	5 inch.						
51	59	8	3	6	.....	63	17	13	5	456.	935.4	133.4	41.8	48.6	66.6	1069.8	235.2	290.8	87.4	.....	2,056.5	1,008.5	69.14	11	4

33 services have been removed.

During the year 183 taps were reported obstructed, and were dug up and examined; 176 were cleaned, and 7 found unobstructed.

22 private taps were inserted.

The following table exhibits the number of service stops opened each month from the commencement to December 31, 1905:

MONTHS, 1871	1872	1873	1874	1875	1876	1877	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905
January.....	54	33	21	34	55	15	49	9	20	7	17	15	21	17	18	26	7	39	36	39	56	40	29	30	27	30	40	18	24	18	27	26	19	24
February.....	47	18	18	7	25	23	18	9	19	3	11	9	10	7	15	7	10	21	25	26	23	24	28	8	28	24	21	7	15	10	18	26	12	11
March.....	38	34	63	7	45	32	60	19	46	23	39	11	28	9	24	16	14	19	28	24	28	36	40	27	20	42	46	28	30	24	39	35	12	20
April.....	109	109	108	32	108	82	78	62	58	55	49	55	62	48	68	60	38	61	53	73	76	71	76	67	100	70	53	69	47	73	73	60	58	60
May.....	224	206	147	162	168	136	95	80	84	66	72	78	62	62	61	76	52	74	66	114	83	91	81	79	98	82	51	73	60	67	52	70	76	80
June.....	329	295	151	172	148	114	103	71	109	82	48	64	81	81	59	50	86	59	80	83	103	106	105	100	76	86	61	73	60	96	71	58	67	75
July.....	333	261	127	141	158	83	80	49	75	50	77	66	76	77	83	62	89	74	67	85	105	93	80	89	83	59	51	66	44	81	74	59	80	73
August.....	224	209	123	83	94	91	51	51	39	58	87	69	61	57	71	49	52	56	76	95	104	115	116	83	64	69	54	80	66	78	62	57	52	75
September....	184	147	139	101	94	80	63	44	37	60	67	93	50	70	59	74	63	64	77	93	114	88	112	70	71	67	53	53	76	72	56	72	61	56
October.....	138	135	100	92	84	81	78	79	48	61	56	47	65	62	52	80	70	64	54	104	102	96	85	90	70	62	47	54	65	66	43	58	66	64
November.....	100	104	185	86	54	73	57	63	54	37	64	49	51	39	57	69	47	58	72	81	118	80	70	68	52	54	42	45	54	63	55	48	58	60
December....	56	83	45	122	60	35	55	45	47	29	40	27	56	44	46	48	42	53	50	83	102	62	62	57	58	53	47	40	56	44	46	43	51	48
Totals....	56	1863	1596	1364	977	1068	865	777	573	618	548	614	612	611	595	612	570	642	684	900	1014	962	884	768	747	698	566	606	597	692	616	612	612	646

The amount of bills approved on account of water works from October 1, to December 31, 1905, inclusive, was:

For maintenance, . . . . . \$98,824 41

Classified as follows:

**PETTACONSET PUMPING STATION.**

Installation of sand filtration plant at Pettaconset.	\$40,265 23	
Coal and wood.....	8,133 92	
Sundries.....	1,877 20	
Real estate.....	1,739 36	
Lights.....	1,570 61	
Cornish engine house.....	1,057 76	
Firemen.....	717 50	
Engineers.....	614 96	
Allis-Chalmers high-duty engine, to furnish and erect.....	497 81	
Superintendence.....	416 00	
Horses, wagons, harnesses, etc.....	297 75	
Leading main from Sockanosset to city — to lay...	286 28	
Oil, waste and packing.....	124 30	
Laying 42-inch force main from Pettaconset to Sockanosset.....	94 38	
Labor on fuel.....	89 40	
Corliss pumping engine and house.....	82 43	
Barn expenses.....	61 97	
Care of grounds.....	53 40	
Worthington high-duty engine.....	49 13	
Repairs on boilers.....	11 05	
Cleaning beds at filtration plant.....	1,629 14	
Labor, pumping at the filter beds.....	986 80	
Laboratory at the filtration plant—labor and supplies.....	763 49	
Sand filtration plant for miscellaneous supplies...	651 80	
		\$62,071 72

**SOCKANOSSET RESERVOIR.**

Sundries.....	\$1,979 83	
Watchman.....	182 00	
		2,161 83

**HOPE PUMPING STATION.**

Firemen.....	\$408 24	
Engineers.....	299 00	
Lights.....	60 04	
Amounts carried forward.....	\$767 28	\$64,233 53

# REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 15

Amounts brought forward.....	\$787 28	\$84,233 55
Oil, waste and packing.....	18 00	
Sundries.....	5 96	
Holly pumping engine.....	2 89	
Repairs on boilers.....	18	
		794 31

## HOPK RESERVOIR.

Watchman.....	\$204 75	
Sundries.....	45 00	
		249 75

## FRUIT HILL RESERVOIR.

Sundries.....	\$405 06	
Watchman.....	182 00	
		587 06

## METER DEPARTMENT.

Water meters.....	\$4,801 36	
Setting and repairing meters.....	1,499 44	
		6,300 80

## PIPE LINE AND SERVICE STOPS.

Repairs .....	\$4,884 88	
Inspection of pipe line and services.....	1,371 30	
Superintendence—salaries .....	874 25	
		7,130 43

## PIPE YARD.

Laying water pipe.....	\$2,425 16	
Laying service pipe.....	1,542 33	
Service pipe.....	840 65	
Special castings.....	673 32	
Taps and stops.....	265 54	
Tools.....	252 64	
Fire hydrants, boxes and covers.....	146 45	
Stop valves.....	126 13	
Labor on and carting pipe.....	124 45	
Pipe yard, office expenses.....	78 77	
Cast iron water pipe.....	39 90	
Repairs on pipe yard buildings.....	27 98	
		6,543 32

## MISCELLANEOUS.

Town of Cranston tax.....	\$8,310 88	
Clerks' and inspectors' salaries.....	1,739 40	
Barn expenses.....	654 48	
Prevention of defilement of the Pawtuxet.....	549 99	

Amounts carried forward.....	\$11,254 75	\$85,839 22
------------------------------	-------------	-------------



Amounts brought forward.....	\$11,354 75	\$35,539 2
Town of North Providence tax.....	400 00	
Car fares .....	365 00	
Horses, wagons, harnesses, etc.....	272 76	
Telephone lines.....	123 68	
Public drinking fountains and troughs.....	40 00	
		\$12,485 19
		\$36,324 41

The total expenditures to December 31,  
1905, inclusive, was . . . . \$10,279,333 27

The *net* expenditure for maintenance from October 1,  
to December 31, 1905, inclusive, was..... \$30,532 68

The *net* expenditure for maintenance to December 31, 1905,  
inclusive, was..... \$2,548,738 08

The value of the water works system  
January 1, 1905, as estimated by the city  
engineer, was as follows:

Pettaconset pumping station.....	\$340,694 00	
Hope pumping station.....	123,654 45	
Sockanosset, Hope and Fruit Hill reservoirs.....	699,014 97	
Main lines and distribution pipes.....	2,717,611 60	
Real estate in Pawtuxet and Lincoln .....	15,975 00	
Tools and supplies.....	35,113 01	
		\$3,932,063 03

Bills deposited with the city treasurer  
for collection from October 1 to December  
31, 1905, inclusive, amounted to . . . \$88,879 34

As follows:

Water.....	\$81,060 08	
Water meters.....	4,220 50	
Setting and repairing meters.....	1,920 00	
Labor and material, laying services, etc.....	1,338 47	
Repairs on pipe line.....	148 75	
Rent of real estate.....	110 50	
Penalties.....	34 00	
Permanently closing service stops.....	25 00	
Blue prints of water distribution.....	2 00	
		\$88,879 34

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$89,951 75

As follows:

Water.....	\$82,126 02	
Water meters.....	4,195 50	
Setting and repairing meters.....	1,750 40	
Labor and material, laying services, etc.....	1,569 58	
Repairs on pipe line.....	148 75	
Rent of real estate.....	100 50	
Penalties.....	34 00	
Permanently closing service stops.....	25 00	
Blue prints of water distribution.....	2 00	
		<hr/>
		\$89,951 75

## SEWERS.

During the quarter, ending December 31, 1905, three hundred and eighty-one permits were issued to drain-layers—one hundred and eighty-nine for new work and one hundred and ninety-two for extensions and repairs of drains.

Three drain-layer's licenses were issued during the quarter, making the total number one hundred and thirty-nine, all of which expire December 31, 1905.

During the quarter, assessments for the cost of constructing sewers were certified to the city treasurer as follows:

Ravine, Randolph and McCaughin streets, as a portion of Section 19.....	\$15 28
Barre street, from Grove 1,300 feet northerly, and in right of way to Harris avenue.....	4,235 98
	<hr/>
	\$4,251 26

October 30th, the proposal of the New England Steam

Brick Company to furnish and deliver at the city yard 200,000 Barrington bricks at \$10.15 per M., was accepted.

December 8th, the proposal of William M. Harris, Jr., to furnish and deliver sewer pipe at the city yard, was accepted and a contract subsequently executed. Amount, \$6,530.20.

The following proposals were received and accepted, namely:

Henry S. Taft, for 75 catch-basin inlet stones, at \$4.70 each.

Charles M. Kelly, for 75 catch-basin flagstones, at \$5.75 each.

December 14th, the proposal of Fuller Iron Works to furnish and deliver at the city yard the sewer castings required during the year 1906, was accepted and a contract subsequently executed. Amount, \$2,600.00.

December 21st, the following proposals were accepted for furnishing and delivering along the line of the work the cement required during the year 1906, and contracts subsequently executed, namely:

William M. Harris, Jr., for the Portland cement.

H. R. Horton Co., for the rosendale cement.

#### SEWERS CONSTRUCTED TO DECEMBER 31, 1905, IN MILES.

ITEMS.	KIND.	Built previous to 1905.	Built during 1905.	Total to Dec. 31, 1905.
Under regular appropriation .....	Brick.	39.296	1.153	40.449
Under regular appropriation .....	Pipe.	132.764	2.026	134.790
Under improved sewerage appropriation .....	Brick and pipe.	28.388	.....	28.388
Total miles of sewers.....		200.448	3.179	203.627

During the year, 90 catch-basins, 63 extra inlets, and 143 inholes have been built, making a total in use December , 1905, of 4,791 catch-basins, 1,658 extra inlets, and 8,775 inholes.

During the quarter, the construction of the following sewers was completed, namely :

of resolution.	Date of approval.	Date of completion
0.	Feb. 7, 1905, <i>Narragansett avenue, from city line northerly to point 600 feet north of Roger Williams avenue ; and in right of way easterly to the main trunk sewer,</i>	Dec. 30, 1905.
1.	May 5, 1905, <i>Blackstone boulevard, west side, from north line of Glen avenue southerly to present end of sewer,</i>	Oct. 16, 1905.
9.	June 16, 1905, <i>Northup avenue, from Silver Spring street to the westerly line of Edwards street,</i>	Oct. 7, 1905.
6.	Sept. 12, 1905, <i>Andem street, from Canton to Bergen,</i>	Dec. 7, 1905.
7.	" " " <i>Grotto avenue, from Penrose to Irving,</i>	Nov. 11, 1905.

Work upon the following sewers, was in progress at the se of the quarter, namely :

of resolution.	Date of approval.
8.	Feb. 7, 1905, <i>Pleasant Valley Division, Section 31.</i>
0.	May 5, 1905, <i>Unit street, from Chalkstone avenue to Maynard street.</i>

Work upon the following sewers, completing the work ordered by the city council, had not commenced December 31, 1905, namely :

No. of resolution. Date of approval.

288. Sept. 12, 1905, *West River street, from Cross to Burke, and from West River street at Elk easterly through right of way about 530 feet to end of section 22 of the improved sewerage system.*
409. Dec. 8, " *Dora street, from a point about 100 feet east of Webster avenue to Priscilla avenue, and from a point about 100 feet east of Priscilla avenue to Whitehall street; and also in Wallace street, from Priscilla avenue to Whitehall street.*
410. " " " *Massie avenue, from Broad street to Baxter, in Baxter street from Massie avenue to its southerly termination; and in right of way from Baxter street to Oxford.*
411. " " " *Waverly street, from Cranston to Union avenue.*
412. " " " *Taber avenue, from Lloyd to President.*
413. " " " *Dixon street, from Sanford avenue to Elmwood.*
414. " " " *Handy street, from Amherst to Amsterdam.*
415. " " " *Endora street, from near Eddy to Poe, and in Poe street from near Rhodes to Public.*
417. " " " *Thayer street, from Barnes to Angell (storm sewer).*



In addition to the accompanying form, the following work has been performed by the sewer maintenance department for the year 1905:

#### WORK ON SEWERS.

Examined 391 sewers for condition and deposit, and all slots, gates, and sumps forty-eight times. Replaced 133 manhole frames, 146 covers, and six track grates; also reset 371 manhole frames. Repaired seven gates in sewers, thirty-eight holes over sewers, thirty-four manholes bringing twelve to grade, thirteen house connections, twenty-two sewers, four precipitation tanks, two buildings at precipitation tanks, and shaft in west gate house. Cut in forty-one connections; removed roots from 144 sewers; flushed two drinking troughs, and set eleven bound stones. Set up hoisting engine at sump at brick station. Connected one basin on Dorrance street with river, and one hydrant with basin connection on Eddy and Blackstone streets. Pumped out sewer to make connection. Unloaded new engine for precipitation tanks. Painted sewer under bridge at Orms street. Put signs on two gate houses; put in one new track grate; painted two gate houses; altered two track grates, and carted press plates to precipitation plant.

#### WORK ON BASINS.

Flushed 2,353 chutes and 4,600 traps in basins. Removed snow from 23,980 inlets, ice from 14,835 feet of gutters, and roots from four basin connections. Thawed out 1,358 chutes and traps. Replaced thirteen basin covers, four inlet stones, and one extra inlet frame and cover. Repaired sixty-four holes at basins, thirty chutes, twenty-four basins, and one sidewalk at basin. Reset sixty-three traps in basins. Put in forty-three extra traps. Built two basins and four chutes in place of old ones.

#### OLD WORK.

Repaired seven old drains and leveled forty-two dumps.

#### MISCELLANEOUS WORK.

Cleaned ninety-nine connections, charged \$233.25; and sewer on Rochambeau avenue for Charles Crankshaw, \$4.50; filled two cisterns, \$4.00; gas tank for Providence Gas Company, \$63.92; and one tank for Builders' Iron Foundry, \$2.50. Repaired two sewers, \$20.25; wall for Mechanics Bank, \$6.75, and connection for John Deary, \$5.75. Pumped out two cellars, \$12.30; one well, \$7.12, and mine for Rhode Island Graphite Company, \$45.00. Puddled ditch and supplied water for Providence Gas Company, \$195.57. Supplied water, etc., put in track grate for New York, New Haven and Hartford Railroad Company, \$96.43. Supplied water, etc., and altered manhole frames for Rhode Island Company, \$199.09. Altered manholes and basins for Brown & Sharpe Manufacturing Company, \$102.74. Flushed sewer and drove

piles for F. E. Shaw, \$10.50. Put in connection for J. Hunt, Allens avenue, \$67.50. Built basin for M. J. Perry, \$44.00; Providence Dyeing Company, \$48.73; Curran & Eurlon, \$35.63. Cut in connection, \$3.25.

**Sewer Construction Department:** Built thirty-four chutes, twenty-five basins, five manholes, 416.41 feet of twelve-inch and 434.85 feet of eight-inch sewer. Took sounding; cleaned outlet to new sewer on Valley street; replaced twenty-one traps in basins; drove test-wells on Narragansett avenue, carted tools from same location and removed six inspectors' houses.

**Water Maintenance Department:** Supplied water on account of frozen services. Removed ashes nine times from Hope pumping station; repaired engines and floor and built coal-bin for same; also repaired drinking fountain, old drain at Sockanosset on account of forty-two-inch force main, and chimnies at Pettaconset and Sockanosset. Pounded and seeded banks at Hope, Sockanosset and Pettaconset. Cleaned engine room at Pettaconset pumping station, reservoir at Sockanosset, ditch on Reservoir avenue, basin at Pettaconset, and filtration tanks. Set bound stones; built five manholes over forty-two-inch force main and one at filtration tanks, and sprinkler box; also fired at Hope station.

**For Highway Department:** Altered manholes and basin on Admiral street and basin on Charles street; filled up old fire well on Fenner street; built eight chutes, 218 feet of twelve-inch and eighty-eight feet of fifteen-inch drain.

The amount of bills approved on account of sewers from October 1 to December 31, 1905, inclusive, was :

For construction, . . . . . \$47,655 42

Charged as follows :

Material.....	\$4,077 88
Contract reservations.....	970 00
Additional catch-basins.....	300 44
Sundries.....	285 66
Testing cement.....	285 00
Tools.....	6 00
Sewer in Andem street, from Canton to Bergen...	764 67
Sewer in Blackstone boulevard, west side, from north line of Glen avenue, southerly to present end of sewer.....	734 08
Sewer in Grotto avenue, from Penrose to Irving...	1,215 04
Sewer in Narragansett avenue, and in right of way from city line to main trunk sewer.....	7,444 60
Amount carried forward.....	\$16,083 37



Amount brought forward.....	\$16,983 37	
Sewer in Northup avenue, from Silver Spring street to the westerly line of Edwards street...	97 13	
Sewer in right of way, from Valley street to the Woonasquatucket river.....	213 50	
Sewer in Unit street, from Chalkstone avenue to Maynard street.....	4,743 49	
Sewer in Pleasant Valley Division, Section 31.....	26,517 93	
		<u>\$47,553</u>

For maintenance, . . . . . \$30,812 0

Classified as follows:

Cleaning basins and sewers.....	\$5,750 86
Repairing basins and sewers.....	2,283 73
Cleaning and repairing old drains.....	930 75
Use of water.....	900 00
Inspection of connections.....	665 08
Tools.....	497 11
Salary, superintendent.....	442 00
Barn expenses.....	404 69
Sundries.....	388 98
Horses, wagons, harnesses, etc.....	163 22
Cleaning private connections.....	78 00
Office expenses.....	40 29
Telephone lines.....	35 45
Car fares.....	20 00
Repairs on gate house.....	6 55

ERNEST STREET STATION.

Coal and wood.....	1,286 47
Engineers.....	839 88
Cleaning screens.....	635 90
Cleaning and repairing pumps.....	570 11
Firemen.....	440 60
Repairs on boilers.....	187 59
Repairs on engines.....	138 65
Supplies.....	107 04
Care of grounds.....	63 32
Care of buildings.....	44 10
Lights.....	40 20

SEWAGE PRECIPITATION TANKS.

Chemicals.....	5,274 14
Miscellaneous supplies.....	4,010 35
Labor in sludge disposal.....	2,353 91

Amount carried forward..... \$28,579 45

# REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 25

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Amount brought forward.....	\$28,579 45
Labor on sewage precipitation.....	1,421 20
Electrical power.....	636 75
Repairs on machinery.....	66 62
Fuel.....	43 53
Lights.....	39 90
Repairs on buildings.....	24 60
	<hr/>
	\$30,812 05

The *net* expenditure for construction of sewers to December 31, 1905, inclusive, was..... \$7,771,605 66

The *net* expenditure for maintenance of sewers to December 31, 1905, inclusive, was..... \$1,271,833 91

Bills deposited with the city treasurer for collection from October 1 to December 31, 1905, inclusive, amounted to . . . \$1,647 23

As follows:

Miscellaneous work.....	\$547 96
Sale of old rubber and bronze.....	238 51
Cleaning private connections.....	74 00
Sewer material.....	780 36
One set of sewer diagrams.....	4 00
Testing cement.....	2 40
	<hr/>
	\$1,647 23

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$1,523 26

As follows:

Miscellaneous work.....	\$451 99
Sale of old rubber and bronze.....	238 51
Cleaning private connections.....	71 75
Sewer material.....	754 61
One set of sewer diagrams.....	4 00
Testing cement.....	2 40
	<hr/>
	\$1,523 26

## HIGHWAYS.

Three permits to open streets were issued during the quarter.

October 2d, the proposal of the Buffalo Steam Roller Company to furnish and deliver at the city yard, South Providence, one 15-ton Buffalo Pitts roller for the sum of \$3,500.00, with an allowance of \$1,250.00 for an old roller taken in exchange, was accepted.

October 12th, the proposal of the Taylor Iron and Steel Company to furnish and deliver certain repairs for the Gates crusher amounting to \$814.50, was accepted.

October 18th, the proposal of the Connecticut Trap Rock Quarries to furnish and deliver 500 tons of crushed stone at \$1.20 per ton, was accepted.

December 15th, the proposal of the Buffalo Steam Roller Company to furnish and deliver at the city yard one set of rear rolls for the Buffalo-Pitts roller, one set of front rolls for the Oastler roller, and 60 roller picks, all for the sum of \$775.00, was accepted.

Seven hundred and fifteen notices to build or repair sidewalks were served on the abutting owners during the year 1905. The work, including one hundred and four brought over from the preceding year, was done as follows :

By the abutting owners.....	650
By the city, at the expense of the abutting owners.....	70
Extension of time for doing work granted to.....	28
Work not done.....	71

The length of received streets December 31, 1905, was about 235.42 miles, measured on street lines and to street line intersection. But, as it is customary in street construction or street paving to complete the work to the curb line intersection, the lengths in the following tables are measured on those lines and sub-divided as follows :

Received streets.....	241.48 miles.
Streets curbed and built.....	165.43 miles.
Streets not curbed, but the roadway macadamized or graveled.....	29.23 miles.
Streets paved.....	33.80 miles.
Streets received, but not improved.....	13.02 miles.
<b>Total.....</b>	<b>241.48 miles.</b>

The actual area of street pavement is 747,281 square yards. If this is estimated to an average width of roadway of 30 feet, it would be equal to 42.46 lineal miles, and is sub-divided as follows :

Granite blocks.....	31.41 miles.
Cobble.....	5.14 miles.
Asphalt.....	5.08 miles.
Vulcanite.....	.41 miles.
Brick.....	.42 miles.

In addition to the general patching necessary to maintain the streets in good repair, the following work has been done during the year ending December 31, 1905, namely :

New streets built.....	17,097.00 linear feet.
Curbing set.....	21,071.5 linear feet.
Streets rebuilt.....	3,600.00 linear feet.
Streets resurfaced.....	216,550.00 linear feet.
Streets graded.....	13,250.00 linear feet.
Block pavement laid.....	6,337.10 yards.
Cobble pavement laid.....	1,849.30 yards.
Asphalt pavement.....	66.70 square yards.
Asphalt pavement relaid.....	4,030.55 square yards.
Cobble pavement relaid.....	5,754.23 square yards.
Block paving relaid.....	18,748.78 square yards.
Brick paving relaid.....	88.66 square yards.
Concrete sidewalks laid.....	1,110.50 square yards.
Concrete sidewalks patched and top-dressed.....	1,835.10 square yards.
Crushed stone used.....	58,730.10 tons.
Screened gravel used.....	6,309. cubic yards.

Of the above amount of pavement relaid, the cost of relaying 7,853.44 square yards, amounting to \$8,072.61, was paid by the corporations for which the work was done.

The following named streets aggregating 41.0 miles have been resurfaced during the year :

Academy avenue, from Atwells to Chalkstone.  
Admiral street, from Whipple to Charles.  
Allens avenue, from Rhodes street to Public.  
Alma street, from Candace to Pekin.  
Almy street, from Westminster to Broadway.  
Althea street, from Cranston to Union avenue.  
Amherst street, from Steuben to 100 feet easterly.  
Angell street, from Hope to Taber avenue.  
Appleton street, from Delaine to Julian.  
Arlington avenue, from Lloyd to Angell street.  
Armstrong avenue, from Brook street to East.  
Arnold street, from Benefit to Hope.  
Atwood street, from Plainfield to McDonough.  
Audrey street, from Delaine to Bowdoin.  
Balaklava street, from Pekin to Douglas avenue.  
Barnes street, from Hope to Prospect.  
Beacon avenue, from Broad street to Friendship.  
Benevolent street, from Benefit to Thayer.  
Benevolent street, from Brook to Cooke.  
Bishop street, from Plain to Willard avenue.  
Blackstone street, from Eddy to Allens avenue.  
Borden street, from Plain to Eddy.  
Broad street, from Friendship to city line.  
Brook street, from Meeting to Hope.  
Brownell street, from Holden to Francis.  
Burnside street, from Public to Thurbers avenue.  
Burrill street, from Weybosset to Westminster.  
Burrington street, from Dexter to Niantic avenue.  
Calhoun avenue, from Huntington to Clinton street.  
Callender street, from Mason to Fountain.  
Calverly street, from Promenade to Okie.  
Camden avenue, from Chalkstone to Vale street.  
Camp street, from Doyle avenue to Rochambeau.  
Candace street, from Orms to Chalkstone avenue.  
Capron street, from Chaffee to Julian.  
Cedar street, from Acorn to Brayton avenue.  
Chalkstone avenue, from Smith street to Lisbon.  
Chapin avenue, from Messer street to Parade.  
Charles Field street, from Benefit to Thayer.  
Cherry street, from Jefferson to Davis.

Chester avenue, from Prairie to Milk street.  
Colfax street, from Broad to Rugby.  
Cottage street, from Dean to Lemon.  
Cushing street, from Prospect to Hope.  
Cypress street, from Elmgrove avenue to Cole.  
Dean street, from Westminster to Atwells avenue.  
Dexter street, from Burrington to Cranston.  
Douglas avenue, from Chalkstone to Orms street.  
Douglas avenue, from O'Neil street to Damon.  
Douglas avenue, from Branch to Geneva bridge.  
Dudley street, from Plain to Prairie avenue.  
Dudley street, from Myrtle to Friendship.  
Eagle street, from Valley to Kinsley avenue  
Eaton street, from Douglas avenue to 800 feet westerly.  
Eden street, from Bell to Broadway.  
Eighth street, from North Main to Summit avenue.  
Elmwood avenue, from Earl street to city line.  
Ernest street, from Eddy to Allens avenue.  
Euclid avenue, from Brook street to Thayer.  
Fenner street, from Westminster to Broad.  
Forest street, from Camp to Ivy.  
Francis street, from Gaspee to Brownell.  
Gallup street, from Broad to Rugby.  
Gano street, from India to Fremont.  
Gay street, from Dudley to Willard avenue.  
Gesler street, from Knight to Almy.  
Gifford street, from Whittier avenue to Laban street.  
Gordon avenue, from Public street to Oxford.  
Governor street, from Wickenden to Power.  
Greene street, from Westminster to Fountain.  
Greenwich street, from Public to Potter avenue.  
Hall street, from Ledge to Northup avenue.  
Hamilton street, from Public to Ontario.  
Hannah street, from Amherst to Amsterdam.  
Harold street, from Valley to Allston.  
Hartford avenue, from Heath street to Killingly.  
Haskins street, from Broad to Lockwood.  
Hayes street, from Francis to Park.  
Haymarket street, from North Main to Canal.  
Hawkins street, from Charles to Branch avenue.  
Hawkins street, from Admiral to Salina.  
Heath street, from Eastwood avenue to Hartford.  
Henderson street, from Eddy to Allens avenue.  
Hope street, from Hart to Forest.  
Hospital street, from Globe to Eddy.  
Inkerman street, from Candace to Pekin.  
Ives street, from Tockwotton to Pitman.  
Jewett street, from Holden to Park.  
John street, from Hope to Governor.

John street, from Brook to Roome lane.  
Killingly street, from Sunset avenue to Hartford.  
Knight street, from Westminster to Broadway.  
Kossuth street, from Putnam to Joslin.  
Lenox avenue, from Broad street to Emerson.  
Lester street, from Pearl to Harrison.  
Lexington avenue, from Melrose street to Hamilton.  
Linden street, from Broad to Pine.  
Linwood avenue, from Union to Cranston street.  
Livingston street, from North Main to West River.  
Lloyd avenue, from Brown street to Hope.  
Lockwood street, from Hospital to Pine.  
Magee street, from George to Benevolent.  
Major street, from Broad to Central.  
Manton avenue, from Florence to King.  
McDonough street, from Atwood to Agnes.  
Meadow street, from Summer to Lockwood.  
Meeting street, from North Main to Benefit.  
Niantic avenue, from Walter street to Balch.  
Northup avenue, from Luna street to Silver Spring.  
Olive street, from Prospect to Thayer.  
Orms street, from Charles to Black.  
Osborne street, from Vale to Chalkstone avenue.  
Oxford street, from Prairie avenue to Gordon.  
Pallas street, from Vernon to Broadway.  
Parade street, from Hudson to Cranston.  
Park street, from Promenade to Smith.  
Parkis avenue, from Elmwood to Broad street.  
Pearl street, from Broad to Cranston.  
Pennsylvania avenue, from Prairie to Broad street.  
Plain street, from Bassett to Public.  
Pond street, from Fenner to Pearl.  
Pontiac street, from Reservoir avenue to city line.  
Potter avenue, from Calhoun to Dexter street.  
Potter avenue, from Elmwood to Niagara street.  
Prairie avenue, from Public street to Oxford.  
Printery street, from Randall to Livingstone.  
Promenade street, from Gaspee to Park.  
Public street, from Broad to Eddy.  
Public street, from Updike to Elmwood avenue.  
Putnam street, from Kossuth to Appleton.  
Reservoir avenue, from Elmwood to railroad bridge.  
Ridge street, from Tobey to Atwells avenue.  
River avenue, from Chalkstone to Allston street.  
Roanoke street, from Academy avenue to Mount Pleasant.  
Rochambeau avenue, from Summit to Hope street.  
Ruggles street, from Chad Brown to Chalkstone avenue.  
Sabin street, from Cope to Broadway.  
Sheldon street, from Brook to Hope.

Sims avenue, from Kinsley to Harris.  
 Smith street, from Elmhurst to Academy avenue.  
 Smith street, from Orms to Francis.  
 Somerset street, from Providence to Prairie avenue.  
 South street, from Eddy to the river.  
 Sprague street, from Dexter to Elmwood avenue.  
 Staniford street, from Bogman to Public.  
 Stanwood street, from Hamilton to Public.  
 Steuben street, from Manton avenue to Atwells.  
 Summer street, from Westminster to Friendship.  
 Sycamore street, from Westminster to Chapin avenue.  
 Terrace avenue, from Union to Laurel Hill.  
 Thayer street, from Angell to Manning.  
 Thayer street, from Power to Transit.  
 Thurbers avenue, from Prairie to Eddy street.  
 Tobey street, from Ridge to Broadway.  
 Transit street, from Brook to Mohawk alley.  
 Trinity square, from Bridgham street to Somerset.  
 Union avenue, from Whitehall street to railroad bridge.  
 Vale street, from Danforth to Douglas avenue.  
 Valley street, from Eagle to River avenue.  
 Veazie street, from Douglas avenue to Douglas.  
 Vernon street, from Vinton to Pallas.  
 Vineyard street, from Carter to Potter avenue.  
 Vinton street, from Carpenter to Atwells avenue.  
 Waldo street, from Dexter to Salem.  
 Waterman street, from Benefit to Hope.  
 Wayland avenue, from Orchard to Waterman street.  
 Webster avenue, from Pocasset to Union.  
 West Clifford street, from Point to Somerset.  
 Westfield street, from Harrison to Elmwood avenue.  
 West Friendship street, from Broad to Elmwood avenue.  
 West River street, from Corliss to Branch avenue.  
 Whipple street, from Oregon to Admiral.  
 Willard avenue, from Plain street to Eddy.  
 Williams street, from Brook to Neighbors lane.  
 Williams street, from Governor to Ives.  
 Winslow street, from Broad to Weybosset.  
 Woodward road, from Martin street to city line.

.68 miles of streets have been rebuilt during the year,  
 namely :

Hartford avenue, from Olneyville square to Heath street.  
 Major street, from Central to Broad.  
 Manton avenue, from Delaine street to Tar bridge.  
 West Clifford street, from Point to Somerset.



2.50 miles of streets have been graded during the year, namely:

Admiral street, from Hillwood to Douglas avenue.  
Allens avenue, from tracks of New York, New Haven & Hartford Railroad Company to the new culvert.  
Charles street, from Hagan to city line.  
Cleveland street, from Laurel Hill avenue to easterly termination.  
Eastwood avenue, from Laurel Hill to Merino street.  
Everett avenue, from Elmgrove to Arlington.  
Grand street, from Potter avenue to Huntington.  
Hamilton street, from Adelaide avenue to Lenox.  
Hope street, from Rochambeau avenue to city line.  
Linton street, from Canton to Academy avenue.  
Reservoir avenue, from Crescent street to Algonquin.  
Reynolds avenue, from Prairie to Burnside street.  
Spencer street, from Almy to Harkness.  
Summit avenue, from Fourth street to Seventh.

During the quarter the following work was completed:

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.

June 16, 1904, *Barre street, from Ridge to Bell.*

“ “ “ *Bell street, from Barre to Eden.*

Sept. 21, 1905, *Spencer street, from Almy to Harkness.*

REMOVE OBSTRUCTIONS, GRADE AND PUT IN GOOD  
CONDITION.

Sept. 21, 1905, *Admiral street, from Douglas avenue to  
Hillwood street.*

The following work was in progress December 31, 1905:

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.

Oct. 19, 1905, *Summit avenue from Fourth street to  
Seventh.*

REMOVE OBSTRUCTIONS, GRADE AND PUT IN GOOD  
CONDITION.

Date of order.

May 18, 1905, *Hope street, from Rochambeau avenue to the city line.*

The following work, ordered by the board of aldermen and city council, had not commenced December 31, 1905, namely:

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.

May 18, 1905, *Narragansett avenue, from the city line northerly to a point about 120 feet north of Ardoene street.*

Sept. 21, 1905, *Unit street, from Chalkstone avenue to Maynard street.*

PAVE WITH GRANITE BLOCKS.

May 5, 1905, *Sabin street, from West Exchange to Aborn*

REMOVE OBSTRUCTIONS, GRADE AND PUT IN GOOD  
CONDITION.

December 21, 1905, *Arthur avenue and Dean street, from West Exchange to new bridge over tracks of the New York, New Haven and Hartford Railroad Co.*

Bills approved on account of highways from October 1 to December 31, 1905, inclusive, amounted to . . . . \$97,586 97

## Classified as follows:

Crushed stone—material and labor.....	\$20,219 83	
Repairs on unpaved streets.....	18,386 32	
Cleaning streets.....	17,840 44	
Stone—paving and crosswalk.....	13,543 01	
Repairs on paved streets.....	4,816 32	
Tools, implements, etc.....	3,574 32	
Blacksmith and wheelwright shop.....	2,097 13	
Barn expenses.....	2,423 44	
Labor on material.....	1,249 20	
Steam rollers—repairs and supplies.....	963 51	
Horses, wagons, harnesses, etc.....	741 55	
Removing snow and ice.....	592 26	
Watering streets.....	566 90	
Repairs on stone crushers.....	446 85	
Superintendent's salary.....	442 00	
Building driveways, etc.....	363 14	
Sundries .....	215 23	
Watchman at city yard.....	156 00	
Office expenses, city yard.....	94 84	
Car fares.....	50 00	
Fencing streets—material and labor.....	28 00	
Repairs on buildings, highway yard.....	6 13	
Telephone lines.....	5 60	
		<u>\$39,410</u>

### NEW WORK — BUILDING AND REBUILDING STREETS, ETC.

#### SIDEWALKS CURBED AND GUTTERS PAVED.

<i>Everett avenue</i> , from Arlington to Elmgrove.....	\$100 00	
<i>Spencer street</i> , from Almy to Harkness.....	791 78	
<i>Summit avenue</i> , from Fourth to Seventh.....	3,094 78	
		<u>3,986</u>

#### REMOVE OBSTRUCTIONS, GRADE AND PUT IN GOOD CONDITION.

Admiral street, from Douglas avenue to Hillwood street.....	\$4,19	
		<u>\$47,58</u>

Bills deposited with the city treasurer  
for collection from October 1 to December  
31, 1905, inclusive, amounted to . . . \$7,218

As follows :

Labor and material.....	\$4,579 15
Building driveways, etc.....	776 50
Blacksmith and harness work for other departments .....	604 18
Sale of old iron and brass.....	529 50
Street sweepings.....	294 75
Boarding horses for other departments.....	197 98
One horse sold to the water department.....	160 00
Manure from barn.....	70 00
Empty oil barrels.....	6 00
	<hr/>
	\$7,218 06

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$5,516 83

As follows :

Labor and material.....	\$3,375 46
Blacksmith and harness work for other departments.....	661 08
Sale of old iron and brass.....	529 50
Street sweepings.....	320 00
Boarding horses for other departments.....	197 98
Building driveways, etc.....	196 81
One horse sold to the water department.....	160 00
Manure from barn.....	70 00
Empty oil barrels.....	6 00
	<hr/>
	\$5,516 83

## SIDEWALKS AND CURBING.

Bills approved on account of sidewalks and curbing from October 1 to December 31, 1905, inclusive, amounted to . . . \$7,259 59

Charged as follows :

Granite curbing.....	\$4,427 75
Concreting sidewalks.....	1,577 28
Repairing sidewalks and gutters.....	1,254 56
	<hr/>
	\$7,259 59

Bills deposited with the city treasurer for collection from October 1 to December 31, 1905, inclusive, amounted to . . . \$1,295 4

As follows :

Curbing bills.....	\$626 61
Granite curbing.....	502 37
Concreting sidewalks.....	86 44
Repairing sidewalks and gutters.....	19 98
	<hr/>
	\$1,295 40

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$1,467

As follows :

Granite curbing.....	\$670 96
Curbing bills.....	626 61
Concreting sidewalks.....	92 91
Repairing sidewalks and gutters.....	77 35
	<hr/>
	\$1,467 83

#### CITY ENGINEER.

Bills approved on account of the city engineer's department from October 1 to December 31, 1905, inclusive, amounted to \$11,588

Charged as follows :

Salary — city engineer.....	\$1,125 00
Salaries of assistants.....	9,380 92
Salaries of clerks.....	789 75
Supplies — drawing material, etc.....	255 62
Telephone lines.....	25 70
Meteorological instruments and repairs.....	6 00
Sundries.....	2 75
Car fares.....	2 65
	<hr/>
	\$11,588 39

Bills deposited with the city treasurer for collection ( for one typewriter ribbon ) from October 1 to December 31, 1905 inclusive, amounted to . . . . . \$ .58

During the quarter, coupons from bills collected (for one typewriter ribbon), have been returned by the city treasurer and re- ceipted for to the amount of . . . . \$ .58

### BRIDGES.

Bills approved on account of bridges from October 1 to December 31, 1905, inclusive, amounted to . . . . . \$4,443 80

Charged as follows :

Barn expenses.....	\$101 17
Crawford street bridge.....	2 60
Gaspee street bridge.....	25 30
Geneva bridge.....	1 85
Horses, wagons, harnesses, etc.....	36 08
Lumber, hardware, etc.....	9 60
Manton avenue bridge.....	29 80
Merino bridge.....	257 37
Point street bridge.....	537 32
Randall street bridge.....	25 02
Red bridge.....	103 40
Rent of keeper's house— Washington bridge.....	36 00
Salaries — Point street bridge.....	1,004 25
Salaries — Red bridge.....	531 00
Salaries — Washington bridge.....	563 50
Smith street bridge.....	12 03
Smithfield avenue bridge.....	351 65
Sundries.....	187 48
Telephone lines.....	2 68
Tools.....	61 66
Valley street bridge — north span.....	10 02
Valley street bridge — south span.....	2 78
Veazie street.....	2 78
Washington bridge.....	533 46
Washington row bridge.....	8 77
West River street.....	3 63
Weybosset bridge.....	2 60
	<hr/>
	\$4,443 80

Bills deposited with the city treasurer for collection from October 1 to December 31, 1905, inclusive, amounted to . . . \$200 00

As follows:

Sale of old lumber . . . . . \$200 00

During the quarter coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$478 00

As follows:

Miscellaneous work . . . . .	\$278 00
Sale of old lumber . . . . .	200 00
	<hr/>
	\$478 00

Bills approved for account of rebuilding abutments and piers, Point street bridge, from October 1 to December 31, 1905, inclusive, have been paid from the special appropriation for that work to the amount of \$10,906

## PUBLIC LIGHTS.

Bills approved on account of the public lights from October 1 to December 31, 1905, inclusive, amounted to . . . \$71,295

Charged as follows:

Arc lights . . . . .	\$51,865 41
Incandescent lights . . . . .	12,706 99
Welsbach lights . . . . .	6,301 65
Salaries . . . . .	411 67
Car fares . . . . .	5 00
Setting and removing gas posts . . . . .	4 86
	<hr/>
	\$71,295 58

Bills deposited with the city treasurer for collection (for one gas post, lantern and frame), from October 1 to December 31, 1905, inclusive, amounted to . . . . \$7 00

During the quarter, coupons from bills collected (for one gas post, lantern and frame), have been returned by the city treasurer and receipted for to the amount of \$7 00

#### PUBLIC WORKS OFFICE.

Bills approved on account of the public works office from October 1 to December 31, 1905, inclusive, amounted to . . . \$5,551 65

#### Charged as follows:

Salaries of commissioner and secretary.....	\$1,850 00
Salaries of office assistants.....	3,397 19
Office supplies.....	284 51
Telephone lines.....	19 95
	<hr/>
	\$5,551 65



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ABOLISHING GRADE CROSSING AT GROVE  
STREET, Etc.

Bills approved for account of building retaining walls, etc., on Barre street, from October 1 to December 31, 1905, inclusive, have been paid from the special appropriation for that work, to the amount of

\$7,423 50

WALTER F. SLADE,

*Commissioner.*

1061

CITY DOCUMENT.

[No. 14]

NINETY-THIRD

QUARTERLY REPORT

OF THE

Department of Public Works

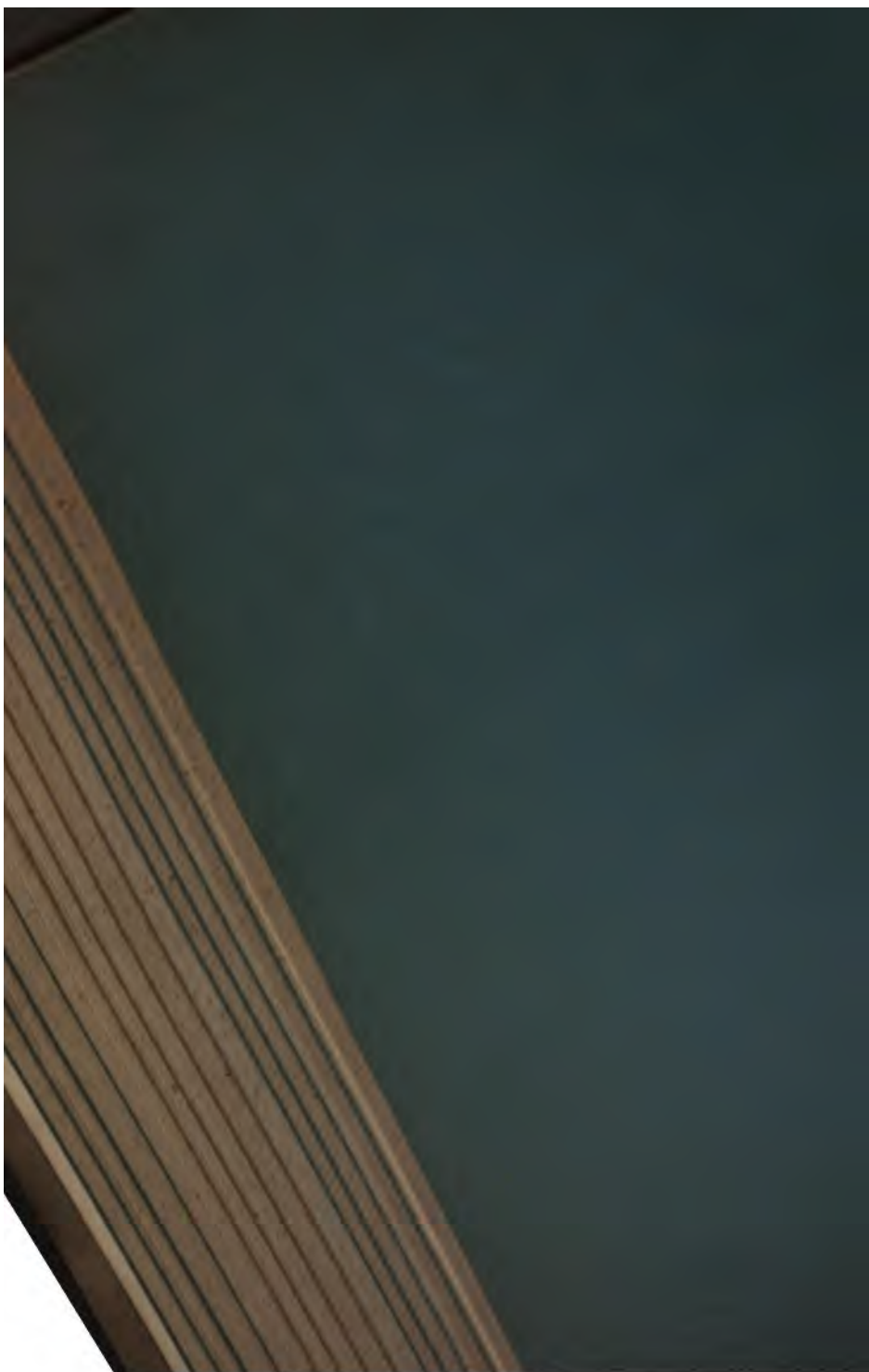
OF THE

CITY OF PROVIDENCE, R. I.

QUARTER ENDING MARCH 31, 1900.



City Document No. 14  
W. N. S. FARRAM, CITY PRINTER.  
100 Washington Street  
1900.



1906.]

CITY DOCUMENT

NINETY-THIRD

QUARTERLY REPORT

OF THE

Department of Public

OF THE

CITY OF PROVIDENCE,

QUARTER ENDING MARCH

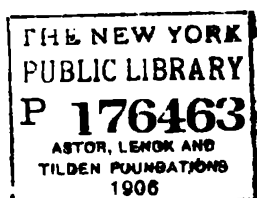


The Providence Press:

SNOW & FARNHAM, CITY PRINTERS

63 Washington Street.

1906.



# REPORT.

OFFICE OF THE DEPARTMENT OF PUBLIC WORKS, }  
CITY HALL, PROVIDENCE, R. I., April 1, 1906. }

TO THE HONORABLE THE CITY COUNCIL:

In compliance with the requirements of Chapter 41 of the ordinances, the Commissioner of Public Works respectfully presents the ninety-third quarterly report of the expenditures by the several departments under his direction and control, with statements of work ordered and the condition and cost of same, for the quarter ending March 31, 1906.

## WATER WORKS.

January 24th, contracts for the laying of the 42-inch leading main from Sockanosset reservoir to the city were awarded to the following parties and subsequently executed, namely:

Frank A. Gammino — Section one.....	\$15,749 50
Bruno, Salomone and Petitti — Section two.....	16,276 10
Frederick E. Shaw — Section three.....	12,224 25
Charles Crankshaw — Section four.....	1,495 15

February 13th, the proposal of Coffin Valve Company to furnish and deliver at the city yard 25 flush hydrants of the Providence pattern, with extra heavy gates, steel boxes and covers, for the sum of \$124.55 each complete, was accepted.

March 24th, the proposal of the Eastern Coal Company to furnish and deliver at Hope pumping station 400 tons of No. 2 North American red ash coal at \$8.05 per net ton, was accepted.

The average daily consumption of water during the last quarter was 214,943,582 gallons.

Water pipes were laid during the quarter as follows :

16-INCH.	
In River avenue.....	515.00 feet.
8-INCH.	
In Taber avenue.....	321.69 feet.
6-INCH.	
In Alexander, Baxter, Dunford, Metcalf, Mercy, Pratt, Ralph, Sevier, Shafter and Unit streets; Grotto, Irving, Massie and Union avenues; in Carleton, Cottage, Grace and Marcy streets in the town of Cranston.....	3,804.63 feet.
Total.....	4,641.32 feet.

or .879 + miles.

Statement of sizes and lengths of pipe laid since the commencement of the work :

42-inch .....	4,979.49 feet
36-inch .....	10,207.57 feet
30-inch .....	61,328.30 feet.
24-inch .....	43,243.86 feet
20-inch .....	9,626.59 feet.
16-inch .....	34,327.95 feet.
12-inch .....	110,835.37 feet.
10-inch .....	15,057.14 feet.
8-inch .....	285,961.62 feet.
6-inch .....	1,269,558.97 feet.
Total.....	1,855,176.86 feet

or, 351,359 + miles.

Statement of sizes and lengths of pipe laid for the special water service for fire protection since the commencement of the work :

---

24-inch .....	4,297.46 feet
16-inch .....	23,004.37 feet
12-inch .....	2,215.76 feet.
<hr/>	
Total. ....	29,517.59 feet

or, 5.59 + miles.

Four fire hydrants have been set during the quarter, one in each of the following locations :

Everett avenue, north side, 304 feet west of Taber avenue.

Massie avenue, south side, 75.5 feet west of Baxter street.

River avenue, North Providence, west side, 29 feet north of gate at Jesse street.

Unit street, east side, 22.5 feet north of Cloud street.

The total number of fire hydrants, exclusive of those for special service for fire protection, is now two thousand and sixty-five — nineteen hundred and fifty-two flush, and one hundred and thirteen post.

The total number of fire hydrants on the special water service for fire protection is ninety-two.

During the quarter two hundred and thirty-eight water meters were set, of which number sixty-five were to replace other meters. The use of twelve meters was discontinued.

The following meters were in use at the close of the quarter :



KIND.	SIZE.									Total.
	$\frac{3}{4}$ -in.	$\frac{1}{2}$ -in.	1-in.	1 $\frac{1}{4}$ -in.	2-in.	3-in.	4-in.	6-in.	8-in.	
Ball & Fitts.....	1,816	377	90	10	4					2,297
Ball & Fitts, rotary.....			4	6		2	1			13
Crown.....	9,743	1,211	360	154	47	31	26	1		11,553
Empire.....	1,386	175	74	50	15	1	1			1,702
Fales, Jenks & Sons.....			1							1
Gem.....					15	30	19	3		67
Hersey.....	24									24
Nash.....	208									208
Thomson.....	4,740	423	74	54	22	7	7	2		5,229
Trident.....	103		1							104
Venturi.....									1	1
	18,020	2,186	604	274	103	71	54	6	1	21,319

One hundred and twenty-one plumbers licenses were issued during the quarter, all of which expire December 31, 1906.

Five hundred and thirty-four permits to do plumbing work were issued during the quarter.

Ninety applications for water were made during the quarter, making the total number twenty-seven thousand four hundred and fifty-seven.

The number of new service stops opened during the quarter was ninety-two.

The total number of service stops opened to March 31, 1906, inclusive, was twenty-six thousand seven hundred and seventy-two. The number in actual use March 31, 1906, was twenty-four thousand five hundred and forty-eight.

The receipts for water each year since the commencement have been as follows :

Year.	Amount.	Year.	Amount.
1872.....	\$41,003 51	1889.....	\$377,497 97
1873.....	97,386 09	1890.....	401,140 86
1874.....	132,052 39	1891.....	404,553 84
1875.....	165,144 71	1892.....	409,421 21
1876.....	183,868 73	1893.....	427,546 51
1877.....	200,039 39	1894.....	432,383 97
1878.....	218,883 33	1895.....	471,069 97
1879.....	229,551 78	1896.....	485,187 33
1880.....	247,705 06	1897.....	490,652 47
1881.....	260,530 87	1898.....	502,603 10
1882.....	269,318 77	1899.....	522,124 46
1883.....	283,632 89	1900.....	554,949 62
1884.....	302,368 36	1901.....	578,869 07
1885.....	313,561 21	1902.....	605,307 35
1886.....	323,084 67	1903.....	621,016 74
1887.....	339,513 60	1904.....	670,700 90
1888.....	346,731 58	1905.....	673,252 97

The amount of bills approved on account of water works from January 1, to March 31, 1906, inclusive, was :

For maintenance, . . . . . \$144,972 73

Classified as follows :

PETTACONSET PUMPING STATION.

Allis-Chalmers high-duty engine, to furnish and erect.....	\$19,000 00
Coal and wood.....	4,836 46
Cleaning beds at filtration plant.....	2,944 29
Leading main from Sockanosset to city—to lay....	2,865 67
Real estate.....	2,186 92
Labor, pumping at the filter beds.....	1,798 80
Amount carried forward.....	\$33,632 14

Amount brought forward.....	\$33,632 14	
Installation of sand filtration plant at Pettaconset.....	1,625 81	
Cornish engine house.....	1,341 32	
Sundries.....	1,231 58	
Firemen.....	1,032 50	
Sand filtration plant for miscellaneous supplies...	886 38	
Engineers.....	646 50	
Laboratory at the filtration plant—labor and supplies.....	572 61	
Corliis pumping engine and house.....	537 67	
Superintendence.....	442 00	
Laying 42-inch force main from Pettaconset to Sockanosset.....	427 37	
Oil, waste and packing.....	226 54	
Repairs on boilers.....	179 38	
Lights.....	146 14	
Care of grounds.....	84 00	
Barn expenses.....	82 37	
Labor on fuel.....	67 60	
Worthington high-duty engine.....	63 72	
Horses, wagons, harnesses, etc.....	2 76	
		\$43,206 39
SOCKANOSSET RESERVOIR.		
Sundries.....	\$317 18	
Watchman.....	182 00	
		499 18
HOPE PUMPING STATION.		
Firemen.....	\$389 80	
Engineers.....	306 71	
Coal and wood.....	169 00	
Lights.....	56 43	
Sundries.....	37 83	
Repairs on boilers.....	17 46	
		977 23
HOPE RESERVOIR.		
Watchman.....	\$204 75	
Sundries.....	11 90	
		216 65
FRUIT HILL RESERVOIR.		
Sundries.....	\$348 81	
Watchman.....	182 00	
		530 81
Amount carried forward.....		\$45,432 26

# REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 9

Amount brought forward..... \$45,432 26

## METER DEPARTMENT.

Water meters.....	\$3,099 63	
Setting and repairing meters.....	1,315 38	
		4,415 01

## PIPE LINE AND SERVICE STOPS.

Repairs .....	\$3,832 65	
Inspection of pipe line and services.....	1,265 28	
Superintendence — salaries .....	874 25	
		5,972 18

## PIPE YARD.

Cast iron water pipe.....	\$65,348 51	
Stop valves.....	6,221 45	
Laying water pipe.....	3,672 86	
Special castings.....	2,206 44	
Laying service pipe.....	1,309 19	
Taps and stops.....	1,284 85	
Fire hydrants, boxes and covers.....	1,194 40	
Service pipe.....	1,063 46	
Labor on carting pipe.....	962 75	
Pig lead and tin.....	624 78	
Tools.....	284 94	
Pipe yard, office expenses.....	49 83	
Patterns for special castings.....	14 00	
		84,237 46

## MISCELLANEOUS.

Clerks' and inspectors' salaries....	\$1,741 40	
Telephone lines.....	904 92	
Barn expenses.....	633 80	
Horses, wagons, harnesses, etc.....	629 78	
Prevention of defilement of the Pawtuxet.....	549 99	
Car fares.....	310 00	
Real estate at Pawtuxet.....	67 50	
Sundries.....	48 43	
Public drinking fountains and troughs.....	30 00	
		4,915 82
		\$144,972 73

The total expenditures to March 31,  
1906, inclusive, was . . . . \$10,424,306 00

The net expenditure for maintenance from January 1,  
to March 31, 1906, inclusive, was..... \$137,622 83

The net expenditure for maintenance to March 31, 1906,  
inclusive, was..... \$2,686,380 91

The value of the water works system January 1, 1906, as estimated by the city engineer, was as follows :

Pettaconset pumping station.....	\$340,694 00
Hope pumping station.....	120,778 78
Sockanosset, Hope and Fruit Hill reservoirs.....	691,498 68
Main lines and distribution pipes.....	2,768,494 94
Real estate in Pawtuxet and Lincoln .....	15,975 00
Tools and supplies.....	39,161 63
	<hr/> \$3,976,603 03

Bills deposited with the city treasurer for collection from January 1 to March 31, 1906, inclusive, amounted to . . . \$451,648 20

As follows :

Water.....	\$444,764 20
Water meters.....	3,662 75
Setting and repairing meters.....	1,525 52
Labor and material, laying services, etc.....	1,299 56
Rent of real estate.....	171 75
Penalties.....	154 00
Repairs on pipe line.....	45 42
Permanently closing service stops.....	25 00
	<hr/> \$451,648 20

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$446,374 48

As follows :

Water.....	\$438,870 58
Water meters.....	3,076 75
Setting and repairing meters.....	2,217 90
Labor and material, laying services, etc.....	1,178 20
Rent of real estate.....	203 50
Penalties.....	154 00
Repairs on pipe line .....	53 55
Permanently closing service stops.....	20 00
	<hr/> \$446,374 48

## SEWERS.

One hundred and thirty-two drain layers' licenses were issued during the quarter all of which expire December 31, 1906.

During the quarter, one hundred and sixty-five permits were issued to drain layers — sixty-six for new work and ninety-nine for extensions and repairs of drains.

During the quarter, assessments for the cost of constructing sewers were certified to the city treasurer as follows:

Reynolds avenue, Wadsworth and Grand streets.....	\$4,243 43
Narragansett avenue and right of way.....	5,802 02
Northup avenue, from Silver Spring street to westerly line of Edwards.....	1,014 53
Andem street, from Canton to Bergen.....	1,823 72
Elmdale avenue, Whitehall and Cleveland streets and Eastwood avenue.....	7,517 50
Rochambeau avenue, from Hope street about 425 feet westerly.	1,746 86
Reservoir and Adelaide avenue.....	1,706 48
Reservoir avenue from Adelaide avenue southerly to Gwinnett court.....	278 96
Douglas avenue, from Farmer street to Vandewater.....	2,536 41
Blackstone boulevard, west side, from north line of Glen avenue northerly.....	160 00
Admiral street, from Hillwood to end of present sewer in Admiral street.....	2,010 28
Linton and Robin streets.....	2,488 17
Unit street, from Chalkstone avenue to Maynard street.....	6,132 10
Grotto avenue, from Penrose to Irving.....	3,232 74
	<hr/> \$40,693 20

January 2nd, the proposal of the Long Island and Fisher Island Brick Company to furnish and deliver at the city yard one cargo of Fisher Island Bricks at \$9.50 per thousand, was accepted.

March 13th, the proposal of the American and British Manufacturing Company to repair one of the Holly pumping engines at Ernest street station for the sum of \$725.00, was accepted.

March 14th, the proposal of The F. W. Wait Lime Company to furnish and deliver in bulk at Harbor Junction the lime required by the sewerage precipitation tanks from March 19, 1906, to May 1, 1907, at \$7.00 per ton of 2,000 pounds, was accepted.

March 23rd, the proposal of William L. Barrell Company to furnish and deliver 5,000 yards of 40-inch 9-ounce duck for filter cloths at 16½ cents per yard, was accepted.

March 12th, contracts for the construction of sewers were awarded to the following parties and subsequently executed, viz.:

[The amounts given below are what are estimated will be paid the contractors for labor, and do not include the cost of inspection and materials.]

#### TO FREDERICK E. SHAW.

No. of resolution. Date of approval.

410.	Dec.	8, 1905,	<i>Massie avenue, from Broad street to Barter, in Barter street, from Massie avenue to its southerly termination and in right of way from Barter street to Oxford .</i>	\$733 00
412.	"	"	<i>Taber avenue, from Lloyd to President .</i>	396 90
414.	"	"	<i>Handy street, from Amherst to Amsterdam .</i>	160 43
415.	"	"	<i>Eudora street, from Eddy to Poe and in Poe street from Rhodes to Public .</i>	663 75
417.	"	"	<i>Thayer street, from Barnes to Angell (storm sewer) .</i>	2,092 40

## TO CHARLES CRANKSHAW.

No. of resolution. Date of approval.

409.	Dec.	8, 1905,	<i>Dora street, from about 100 feet east of Webster avenue to Priscilla, and from about 100 feet east of Priscilla avenue to Whitehall street; also in Wallace street, from Priscilla avenue to Whitehall street . . .</i>	\$1,142 40
411.	"	"	<i>Waverly street, from Cranston to Union avenue</i>	785 60

## TO GEORGE W. UPPER.

413.	"	"	<i>Dixon street, from Stamford avenue to Elmwood</i>	399 30
------	---	---	--	--------

During the quarter, the construction of the following sewer was completed, namely :

No. of resolution. Date of approval.

Date of completion.

180.	May	5, 1905,	<i>Unit street, from Chalkstone avenue to Maynard street . . .</i>	Feb. 26, 1906.
------	-----	----------	--	----------------

Work upon the following sewer was in progress at the close of the quarter, namely :

No. of resolution. Date of approval.

68.	Feb.	7, 1905,	<i>Pleasant Valley Division, Section 31.</i>
-----	------	----------	--

Work upon the following sewers, completing the work ordered by the city council, had not commenced March 31, 1906, namely :



No. of resolution. Date of approval.

288. Sept. 12, 1905, *West River street, from Cross to and from West River street at El*  
*erly through right of way above*  
*feet to end of section 22 of the im*  
*sewerage system.*
409. Dec. 8, " *Dora street, from a point about 1*  
*east of Webster avenue to Prisci*  
*and from a point about 1*  
*east of Priscilla avenue to W*  
*street; and also in Wallace stre*  
*Priscilla avenue to Whitehall s*
410. " " " *Massie avenue, from Broad*  
*Baxter, in Baxter street from*  
*avenue to its southerly terminati*  
*in right of way from Baxter*  
*Oxford.*
411. " " " *Waverly street, from Cranston*  
*avenue.*
412. " " " *Taber avenue, from Lloyd to I*
413. " " " *Dixon street, from Sanford c*  
*Elmwood.*
414. " " " *Handy street, from Amherst to*  
*dam.*
415. " " " *Eudora street, from near Edd*  
*and in Poe street from near*  
*Public.*
417. " " " *Thayer street, from Barnes*  
*(storm sewer).*

OF THE DEPARTMENT OF PUBLIC WORKS. 13  
RLES CRANKSHAW.  
from about  
Webster  
and

DEPARTMENT OF PUBLIC WORKS. 15

account of sewers from  
was :

\$31,152 92

	\$3,311 74
	495 00
	300 36
	294 64
	214 98
	67
, from Amherst to Amster-	
	21 19
sett avenue, and in right of way	
e to main trunk sewer.....	27 75
street, from Chalkstone avenue to	
d street.....	2,443 51
Pleasant Valley Division, Section 31.....	24,034 08

\$31,152 92

for maintenance, . . . . . \$26,746 31

Classified as follows:

Cleaning basins and sewers.....	\$6,081 86
Repairing basins and sewers.....	2,036 36
Inspection of connections.....	640 08
Cleaning and repairing old drains.....	515 28
Horses, wagons, harnesses, etc.....	475 46
Salary, superintendent.....	442 00
Barn expenses.....	371 96
Tools.....	220 10
Repairs on buildings, sewer maintenance yard....	197 03
Sundries.....	93 02
Telephone lines.....	35 93
Cleaning private connections.....	34 40
Office expenses.....	32 90
Filling cisterns, etc.....	10 00

ERNEST STREET STATION.

Coal and wood.....	1,533 79
Engineers.....	833 36
Cleaning screens.....	694 24
Cleaning and repairing pumps.....	477 63
Firemen.....	435 69

Amount carried forward..... \$15,161 69

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No. of resolution. Date of approval.

288. Sept. 12, 1905, *West River street, from Cross to Burke, and from West River street at Elk easterly through right of way about 530 feet to end of section 22 of the improved sewerage system.*
409. Dec. 8, " *Dora street, from a point about 100 feet east of Webster avenue to Priscilla avenue, and from a point about 100 feet east of Priscilla avenue to Whitehall street; and also in Wallace street, from Priscilla avenue to Whitehall street.*
410. " " " *Massie avenue, from Broad street to Baxter, in Baxter street from Massie avenue to its southerly termination; and in right of way from Baxter street to Oxford.*
411. " " " *Waverly street, from Cranston to Union avenue.*
412. " " " *Taber avenue, from Lloyd to President.*
413. " " " *Dixon street, from Sanford avenue to Elmwood.*
414. " " " *Handy street, from Amherst to Amsterdam.*
415. " " " *Eudora street, from near Eddy to Poe, and in Poe street from near Rhodes to Public.*
417. " " " *Thayer street, from Barnes to Angell (storm sewer).*

The amount of bills approved on account of sewers from January 1 to March 31, 1906, inclusive, was :

For construction, . . . . . \$31,152 92

Charged as follows :

Material.....	\$3,311 74
Contract reservations.....	495 00
Testing cement.....	300 36
Sundries.....	294 64
Additional catch-basins.....	214 98
Tools.....	67
Sewer in Handy street, from Amherst to Amsterdam.....	21 19
Sewer in Narragansett avenue, and in right of way from city line to main trunk sewer.....	27 75
Sewer in Unit street, from Chalkstone avenue to Maynard street.....	2,443 61
Sewer in Pleasant Valley Division, Section 31.....	24,034 08
	<u>\$31,152 92</u>

For maintenance, . . . . . \$26,746 31

Classified as follows :

Cleaning basins and sewers.....	\$6,081 86
Repairing basins and sewers.....	2,036 36
Inspection of connections.....	640 08
Cleaning and repairing old drains.....	515 28
Horses, wagons, harnesses, etc.....	475 46
Salary, superintendent.....	442 00
Barn expenses.....	371 96
Tools.....	220 10
Repairs on buildings, sewer maintenance yard....	197 03
Sundries.....	93 02
Telephone lines.....	35 93
Cleaning private connections.....	34 40
Office expenses.....	32 90
Filling cisterns, etc.....	10 00

ERNEST STREET STATION.

Coal and wood.....	1,533 79
Engineers.....	833 36
Cleaning screens.....	694 24
Cleaning and repairing pumps.....	477 63
Firemen.....	435 69

Amount carried forward..... \$15,161 69

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No. of resolution. Date of approval.

288. Sept. 12, 1905, *West River street, from Cross to Burke, and from West River street at Elk easterly through right of way about 530 feet to end of section 22 of the improved sewerage system.*
409. Dec. 8, " *Dora street, from a point about 100 feet east of Webster avenue to Priscilla avenue, and from a point about 100 feet east of Priscilla avenue to Whitehall street; and also in Wallace street, from Priscilla avenue to Whitehall street.*
410. " " " *Massie avenue, from Broad street to Baxter, in Baxter street from Massie avenue to its southerly termination; and in right of way from Baxter street to Oxford.*
411. " " " *Waverly street, from Cranston to Union avenue.*
412. " " " *Taber avenue, from Lloyd to President.*
413. " " " *Dixon street, from Sanford avenue to Elmwood.*
414. " " " *Handy street, from Amherst to Amsterdam.*
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Sewer in Pleasant Valley Division, Section 31.....	24,034 08
	<hr/>
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Classified as follows :

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Inspection of connections.....	640 08
Cleaning and repairing old drains.....	515 28
Horses, wagons, harnesses, etc.....	475 46
Salary, superintendent.....	442 00
Barn expenses.....	371 96
Tools.....	220 10
Repairs on buildings, sewer maintenance yard....	197 03
Sundries.....	93 62
Telephone lines.....	35 93
Cleaning private connections.....	34 40
Office expenses.....	32 90
Filling cisterns, etc.....	10 00

ERNEST STREET STATION.

Coal and wood.....	1,533 79
Engineers.....	833 36
Cleaning screens.....	694 24
Cleaning and repairing pumps.....	477 63
Firemen.....	435 69
	<hr/>
Amount carried forward.....	\$15,161 69

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Amount brought forward.....	\$15,161 09
Repairs on engines.....	133 21
Care of grounds.....	79 19
Supplies.....	74 78
Lights.....	33 75
Care of buildings.....	26 24
Repairs on boilers.....	8 84

## SEWAGE PRECIPITATION TANKS.

Chemicals.....	4,912 20
Labor in sludge disposal.....	2,616 98
Labor on sewage precipitation.....	1,400 20
Miscellaneous supplies.....	1,256 46
Electrical power.....	488 50
Repairs on machinery.....	255 29
Fuel.....	179 76
Repairs on buildings.....	83 81
Lights.....	31 05
Repairs on tanks.....	36
	<hr/>
	\$26,746 31

The net expenditure for construction of sewers to March 31, 1906, inclusive, was..... \$7,801,739 07

The net expenditure for maintenance of sewers to March 31, 1906, inclusive, was..... \$1,226,235 39

Bills deposited with the city treasurer for collection from January 1 to March 31, 1906, inclusive, amounted to . . . \$1,210 54

## As follows :

Fidelity and Deposit Company, for completing sewer in Narragansett avenue, and in right of way...	\$600 00
Miscellaneous work.....	107 60
Sale of old rubber .....	52 43
Cleaning private connections.....	41 25
Empty cement bags.....	18 70
Pumping out cellar.....	10 00
Sewer material.....	370 06
Testing cement.....	19 50
	<hr/>
	\$1,210 54

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of . . . \$1,364 34

As follows:

Fidelity and Deposit Company, for completing sewer in Narragansett avenue and in right of way .....	\$400 00
Miscellaneous work.....	231 13
Sale of old rubber.....	52 43
Cleaning private connections.....	43 25
Empty cement bags.....	18 70
Pumping out cellars.....	10 00
Sewer material.....	389 23
Testing cement.....	9 60
	<hr/>
	\$1,364 34

### HIGHWAYS.

January 18th, the proposal of Crabtree and Havey to furnish and deliver 15,000 linear feet of granite curbing for the sum of 52 cents per foot, was accepted.

January 19th, the proposal of the Sweeney Granite Works to furnish and deliver at city yard 15,000 granite blocks at \$1.50 per square yard, was accepted.

January 22d, the following proposals were received and accepted for furnishing and delivering material at the city yard, namely:

Nelson A. Bennett, 50 pieces curbing, of 10-foot radius @ \$3 25 each	
40 bound stones..... @ 1 25 each	
Albert Lippitt, 25 pieces curbing, of 8-foot radius..... @ 2 71 each	
Smithfield Granite Co., 30 pieces of 2-foot curb corners @ 2 10 each	
James Beaton, 1,000 linear feet of 14-inch crosswalk stone..... @ .32 per foot	

February 15th, the following prices were received from the sale of old buildings to be removed from Crawford and South Main streets, namely:

Martin E. Hogan for old custom house.....	\$165 00
Joseph A. Hogan for three buildings.....	290 00

March 13th, statements were prepared of the cost of curbstones set, ascertained by the commissioner and certified to the board of aldermen for approval, as follows:



Cleveland street, from easterly termination to Laurel Hill avenue	\$477 65
Eastwood avenue, from Ralph street to Laurel Hill avenue.....	721 90
Eastwood avenue, from Laurel Hill to Merino street.....	798 27
Elmdale avenue, from Whitehall street to Webster avenue.....	1,437 18
Laban street, from Laurel Hill to Merino street.....	747 17
Linton street, from Academy avenue to Canton street.....	754 14
Moulton street, from Westminster to Bewet.....	280 05
Ninth street, from North Main to Highland avenue.....	324 02
Reservoir avenue, west side, from Algonquin street to Crescent...	598 58
Reynolds avenue, from Prairie to Burnside street.....	841 44
Robin street, from Berkley to Regent avenue.....	653 39
Spencer street, from Almy to Harkness.....	470 02
Tiber street, from Ridge to Swiss.....	135 07
Wadsworth street, from Sorrento to Cranston.....	744 78
Whitehall street, from Wallace to Union avenue.....	1,378 39

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\$11,075 45

March 23d, the proposal of Booth Brothers and Hurricane Isle Granite Company was accepted, to furnish and deliver at the city yard 10,000 square yards of granite blocks at \$1.49 per yard if delivered by rail, or \$1.47 per yard if delivered by water.

March 24th, the proposal of I. Capaldi and Company to furnish and deliver on What Cheer avenue 900 linear feet of curbing at 55 cents per foot, was accepted.

March 27th, the proposal of Arthur C. Gould to furnish and deliver on the line of the work 2,000 feet of granite curbing at 55 cents per linear foot, was accepted.

During the quarter the following work was completed :

#### SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.

Oct. 19, 1905, *Summit avenue from Fourth street to Seventh.*  
 Jan. 18, 1906, *Grotto avenue, from Penrose to Irving.*

The following work was in progress March 31, 1906.

## SIDEWALKS CURBED AND GUTTERS PAVED.

## Date of order.

- May** 18, 1905, *Narragansett avenue, from the city line northerly to a point about 120 feet north of Ardoene street.*
- Feb.** 15, 1906, *What Cheer avenue, from Laurel Hill to Pocasset.*

## REMOVE OBSTRUCTIONS, GRADE AND PUT IN GOOD CONDITION.

## Date of order.

- May** 18, 1905, *Hope street, from Rochambeau avenue to the city line.*
- Dec.** 21, 1905, *Arthur avenue and Dean street, from West Exchange to new bridge over tracks of the New York, New Haven and Hartford Railroad Company.*

The following work, ordered by the board of aldermen and city council, had not commenced March 31, 1906, namely:

## SIDEWALKS CURBED AND GUTTERS PAVED.

## Date of order.

- Sept.** 21, 1905, *Unit street, from, Chalkstone avenue to Maynard street.*
- Jan.** 18, 1906, *Andem street, from Canton to Bergen.*
- “ “ “ *Dixon street, from Elmwood avenue to Stamford.*
- “ “ “ *Baxter street, from Massie avenue to its southerly termination.*
- “ “ “ *Massie avenue, from Broad street to Baxter.*
- “ “ “ *Handy street, from Amsterdam to Amherst.*
- “ “ “ *Waverly street, from Union avenue to Cranston street.*

- Jan. 18, 1906, *Taber avenue, from President to Lloyd.*  
 " " " *Wallace street, from Priscilla avenue to Whitehall street.*  
 " " " *Dora street, from Webster avenue to Whitehall street.*  
 " " " *Ralph street, from Eastwood avenue to Laban street.*  
 Feb. 15, 1906, *Arthur avenue and Dean street, from West Exchange to new bridge over tracks of the N. Y., N. H. & H. R. R. Co.*

#### PAVE WITH GRANITE BLOCKS.

Date of order.

May 5, 1905, *Sabin street, from West Exchange to Aborn.*

#### REMOVE OBSTRUCTIONS, GRADE AND PUT IN GOOD CONDITION.

Date of order.

Jan. 18, 1906, *Crawford street, from South Water to South Main and South Main street from Crawford to Planet.*

Bills approved on account of highways from January 1 to March 31, 1906, inclusive, amounted to:

Regular appropriation.....	\$61,554 85	
Special appropriation.....	50 22	
	<hr/>	\$61,605 07

Classified as follows:

Crushed stone—material and labor.....	\$18,055 79
Stone—paving and crosswalk.....	8,593 60
Cleaning streets.....	7,167 67
Repairs on unpaved streets.....	6,055 80
Blacksmith and wheelwright shop.....	3,196 04
Removing snow and ice.....	2,908 45
	<hr/>
Amount carried forward.....	\$45,977 35

# REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 21

Amount brought forward.....	\$45,977 35	
Steam rollers—repairs and supplies.....	2,376 06	
Barn expenses.....	2,284 23	
Repairs on stone crushers.....	1,620 29	
Labor on material.....	1,237 80	
Tools, implements, etc.....	804 47	
Repairs on paved streets.....	641 09	
Superintendent's salary.....	442 00	
Horses, wagons, harnesses, etc.....	209 84	
Sundries .....	172 93	
Watchman at city yard.....	156 00	
Office expenses, city yard.....	83 50	
Fencing streets—material and labor.....	69 48	
Building driveways, etc.....	47 88	
Telephone lines.....	5 60	
Repairs on buildings, highway yard.....	21	
		\$56,128 73

## NEW WORK — BUILDING AND REBUILDING STREETS, ETC.

### SIDEWALKS CURBED AND GUTTERS PAVED.

<i>Grotto avenue</i> from Penrose to Irving.....	\$706 43	
<i>Narragansett avenue</i> , from the city line northerly to a point about 120 feet north of Ardoene street.....	3,505 02	
<i>What Cheer avenue</i> , from Laurel Hill to Pocasset..	1,214 67	
		5,426 12

### REMOVE OBSTRUCTIONS, GRADE AND PUT IN GOOD CONDITION.

<i>Crawford street</i> , from South Water to South Main, and South Main street, from Crawford to Planet	50 22	
		\$61,605 07

Bills deposited with the city treasurer for  
collection from January 1 to March 31,  
1906, inclusive, amounted to . . . \$1,652 09

### As follows:

Blacksmith and harness work for other departments	\$487 65	
Sale of old buildings, Crawford and South Main streets .....	455 00	
Street sweepings.....	338 25	
Boarding horses for other departments.....	201 78	
Manure from barn.....	72 00	
Building driveways, etc.....	60 77	
Labor and material.....	33 44	
Empty oil barrels.....	3 20	
		\$1,652 09

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of **\$3,827 65**

As follows :

Labor and material.....	\$1,332 30
Building driveways, etc.....	630 65
Blacksmith and harness work for other departments .....	604 13
Sale of old buildings, Crawford and South Main streets.....	455 00
Street sweepings.....	338 25
Boarding horses for other departments.....	201 78
Manure from barn.....	72 00
Empty oil barrels.....	3 30
	<hr/>
	\$3,827 65

### SIDEWALKS AND CURBING.

Bills approved on account of sidewalks and curbing from January 1 to March 31, 1906, inclusive, amounted to **\$987 83**

Charged as follows :

Granite curbing.....	\$486 10
Concreting sidewalks.....	400 48
Repairing sidewalks and gutters.....	29 25
	<hr/>
	\$987 83

Bills deposited with the city treasurer for collection from January 1 to March 31, 1906, inclusive, amounted to **\$11,107 88**

As follows :

Curbing bills.....	\$11,075 45
Granite curbing.....	19 76
Concreting sidewalks.....	12 67
	<hr/>
	\$11,107 88

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$1,247 93

As follows:

Curbing bills.....	\$1,137 36
Granite curbing.....	80 92
Repairing sidewalks and gutters.....	16 98
Concreting sidewalks.....	12 67
	<hr/>
	\$1,247 93

#### CITY ENGINEER.

Bills approved on account of the city engineer's department from January 1 to March 31, 1906, inclusive, amounted to \$11,811 00

Charged as follows:

Salary — city engineer.....	\$1,125 00
Salaries of assistants.....	9,400 67
Salaries of clerks.....	789 75
Supplies — drawing material, etc.....	264 63
Car fares.....	201 05
Telephone lines.....	25 70
Sundries.....	2 40
Meteorological instruments and repairs.....	1 25
Instruments and repairs.....	55
	<hr/>
	\$11,811 00

Bills deposited with the city treasurer for collection (for one small city map), from January 1 to March 31, 1906, inclusive, amounted to \$ 25

During the quarter, coupons from bills collected (for one small city map), have been returned by the city treasurer and receipted for to the amount of \$ 25

## BRIDGES.

February 20th, the proposal of William M. Harris, Jr., to furnish and deliver 33,000 feet of yellow pine lumber at \$25.00 and \$26.00 per thousand, was accepted.

March 7th, contracts were awarded, and subsequently executed, for rebuilding the superstructures of the following bridges, namely:

Point street bridge to Penn Bridge Company..... \$24,768 12

Smithfield avenue bridge to New Jersey Bridge

Company..... 2,157 30 .

Bills approved on account of bridges from

January 1 to March 31, 1906, inclusive,

amounted to . . . . . \$4,125 63

Charged as follows:

Barn expenses.....	\$93 33
Building at city yard.....	1 33
Cemetery street bridge.....	1 20
Crawford street bridge.....	34 89
Gaspee street bridge.....	12 45
Horses, wagons, harnesses, etc.....	19 45
Lumber, hardware, etc.....	86 03
Manton bridge.....	3 97
Manton avenue bridge.....	11 78
Merino bridge.....	2 65
Mill street bridge.....	5 37
Point street bridge.....	638 41
Promenade street bridge.....	2 25
Randall street bridge.....	8 23
Red bridge.....	334 41
Rent of keeper's house— Washington bridge.....	36 00
Salaries— Point street bridge.....	976 75
Salaries— Red bridge.....	513 50
Salaries— Washington bridge.....	521 21
Smith street bridge.....	3 52
Smithfield avenue bridge.....	22 75
Smithfield avenue bridge— to rebuild.....	27 00
Sundries.....	258 94
Telephone lines.....	2 68
Tools.....	200 61
Washington bridge.....	257 54
Washington row bridge.....	8 88
Weybosset bridge.....	40 51

\$4,125 63

Bills deposited with the city treasurer for collection from January 1 to March 31, 1906, inclusive, amounted to \$44 65

As follows:

Lumber, hardware, etc.....	\$30 15	
Sale of paint stock.....	13 50	
Sweepings from Washington bridge.....	1 00	
		\$44 65

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$44 65

As follows:

Lumber, hardware, etc.....	\$30 15	
Sale of paint stock.....	13 50	
Sweepings from Washington bridge.....	1 00	
		\$44 65

Bills approved for account of building the river walls between the Burnside and Exchange bridges from January 1 to March 31, 1906, inclusive, have been paid from the special appropriation for that work, to the amount of \$1,369 87

Bills approved for account of rebuilding abutments, piers and superstructure, Point street bridge, from January 1 to March 31, 1906, inclusive, have been paid from the special appropriation for that work, to the amount of \$11,020 29





ABOLISHING GRADE CROSSING AT GROVE  
STREET, Etc.

Bills approved for account of building retaining walls, etc., on Barre street, from January 1 to March 31, 1906, inclusive, have been paid from the special appropriation for that work, to the amount of . . . \*209 51

WALTER F. SLADE,  
*Commissioner.*



1906.]

CITY DOCUMENT.

NINETY-FOURTH  
QUARTERLY REPORT  
OF THE  
Department of Public  
OF THE  
CITY OF PROVIDENCE, R.  
QUARTER ENDING JUNE 30, 1906.



The Providence Press:  
SNOW & FARNHAM, CITY PRINTERS,  
63 Washington Street,  
1906.

1906.]

CITY DOCUMENT

NINETY-FOURTH  
QUARTERLY REPORT

OF THE

Department of Public

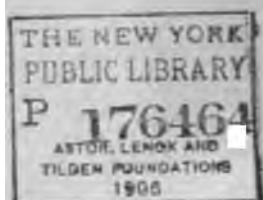
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63 Washington Street,  
1906.



# REPORT.

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OFFICE OF THE DEPARTMENT OF PUBLIC WORKS, }  
CITY HALL, PROVIDENCE, R. I., July 1, 1906. }

TO THE HONORABLE THE CITY COUNCIL:

In compliance with the requirements of Chapter 41 of the ordinances, the Commissioner of Public Works respectfully presents the ninety-fourth quarterly report of the expenditures by the several departments under his direction and control, with statements of work ordered and the condition and cost of same, for the quarter ending June 30, 1906.

## WATER WORKS.

**April 10th**, the proposal of the Warren Foundry & Machine Company to furnish and deliver in the city yard 1,537 tons of cast-iron water pipe at \$29.80 per net ton, was accepted.

**April 11th**, the proposal of The Congdon & Carpenter Company to furnish and deliver at the city yard five tons of St. Joe pig lead at \$5.65 per hundred pounds, was accepted.

**April 16th**, the proposal of A. S. Corr to inspect 1,537 tons of water pipe at the foundry of the Warren Foundry & Machine Company for the sum \$153.70, was accepted.

**June 11th**, the proposal of the Pettaconsett Construction  
id two additional filter beds, and to cover

the eight beds now built, at Pettaconset pumping station, was accepted and a contract subsequently executed. Amount \$295,066.66.

June 21st, the following proposals for furnishing the coal required by the water department for one year to July 1, 1907, were accepted, viz.:

Providence Coal Company, for New River coal at Pettaconset, \$3.72½ per net ton, delivered.

Providence Coal Company, for anthracite at Pettaconset, \$5.75 per net ton, delivered.

Providence Coal Company, for anthracite at pipe yard, \$5.20 per net ton, taken at company's yard.

Eastern Coal Company, for No. 2 North American red ash at Hope Station, \$2.88 per net ton, delivered.

The average daily consumption of water during the last quarter was 15,062,873 gallons.

Water pipes were laid during the quarter as follows:

12-INCH.	
In Hope street and Allens avenue.....	982.79 feet.
8-INCH.	
In Woodward road: in Narragansett boulevard, Narragansett street, Pawtuxet and Pontiac avenues in the town of Cranston; in Smith street and River avenue in town of North Providence.....	8,175.22 feet
6-INCH.	
In Rodgers court: Dora, Glover, Huron, Kimball, Lauriston, Moorefield, Magnolia and Smith streets; Summit, Terrace and Whitford avenues; in Alto, Heather and Narragansett streets and Norwood avenue in the town of Cranston.....	3,658.16 feet.
Total.....	12,816.17 feet.
or 2.427 + miles.	

Water pipes have been removed during the quarter as follows:

6-INCH.	
From Ashton and Merchant streets .....	613.48 feet.
or .116 + miles.	



Statement of sizes and lengths of pipe laid since the commencement of the work :

42-inch.....	4,979.49 feet.
36-inch.....	10,207.57 feet.
30-inch.....	61,328.30 feet.
24-inch.....	43,293.86 feet.
20-inch.....	9,626.59 feet.
16-inch.....	34,327.95 feet.
12-inch.....	111,818.16 feet.
10-inch.....	15,057 14 feet.
8-inch.....	304,136.84 feet.
6-inch.....	1,272,603.65 feet.
<b>Total.....</b>	<b>1,867,379.35 feet.</b>

or, 353.670 + miles.

Statement of sizes and lengths of pipe laid for the special water service for fire protection since the commencement of the work :

24-inch .....	4,297.46 feet
16-inch .....	23,004.37 feet
12-inch .....	2,215.76 feet.
<b>Total. ....</b>	<b>29,517.59 feet.</b>

or, 5.59 + miles.

Ten fire hydrants were set during the quarter, one in each of the following locations :

- Allens avenue, east side, 239 feet north of Henderson street.
- Hope street, east side, 2 feet north of line of Eighth street.
- Summit avenue, east side, 3 feet south of Glendale avenue.
- River avenue, North Providence, west side, 190½ feet south of Zipporah street.
- River avenue, North Providence, west side, 711½ feet south of Zipporah street.
- River avenue, North Providence, west side, opposite Allendale park.
- River avenue, North Providence, west side, 387 feet south of George street.
- Smith street, North Providence, south side, 3 feet west of Mineral Spring avenue.
- Smith street, North Providence, south side, 278½ feet west of Waterman avenue.
- Smith street, North Providence, south side, 14½ feet west of River avenue.

The total number of fire hydrants, exclusive of those for special service for fire protection, is now two thousand and seventy-five — nineteen hundred and fifty-five flush, and one hundred and twenty post.

The total number of fire hydrants on the special water service for fire protection is ninety-two.

During the quarter two hundred and forty-four water meters were set, of which number forty-one were to replace other meters. The use of sixteen meters was discontinued.

The following meters were in use at the close of the quarter:

KIND.	SIZE.									Total.
	$\frac{1}{2}$ -in.	$\frac{3}{4}$ -in.	1-in.	1 $\frac{1}{2}$ -in.	2-in.	3-in.	4-in.	6-in.	8-in.	
Ball & Fitts.....	1,792	370	87	9	4	.....	.....	.....	.....	2,262
Ball & Fitts, rotary....	.....	.....	4	6	.....	2	1	.....	.....	13
Crown.....	9,774	1,223	362	158	49	32	27	1	.....	11,626
Empire.....	1,443	180	77	51	14	1	1	.....	.....	1,767
Fales, Jenks & Sons....	.....	.....	1	.....	.....	.....	.....	.....	.....	1
Gem.....	.....	.....	.....	.....	17	30	19	3	.....	69
Hersey.....	24	.....	.....	.....	.....	.....	.....	.....	.....	24
Nash.....	268	.....	.....	.....	.....	.....	.....	.....	.....	268
Thomson.....	4,784	421	74	54	22	7	7	2	.....	5,371
Trident.....	103	.....	1	.....	.....	.....	.....	.....	.....	104
Venturi.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1
	18,188	2,194	606	278	106	72	55	6	1	21,506

Four plumbers' licenses were issued during the quarter. One plumber's license has been suspended; one plumber's license revoked and one plumber has deceased. The total

number of licenses in force June 30, 1906, was one hundred and twenty-two.

Six hundred and ninety plumbing permits were issued during the quarter.

Two hundred and eighteen applications for water were made during the quarter making the total number twenty-seven thousand six hundred and seventy-five.

The number of new service stops opened during the quarter was one hundred and ninety-six.

The total number of service stops opened to June 30, 1906, inclusive, was twenty-six thousand nine hundred and sixty-eight. The number in actual use June 30, 1906, was twenty-four thousand eight hundred and sixty-one.

The amount of bills approved on account of water works from April 1, to June 30, 1906, inclusive, was:

For maintenance, . . . . . \$183,616 22

Classified as follows:

PETTACONSET PUMPING STATION.

Coal and wood.....	\$3,799 84	
Cornish engine house.....	1,484 39	
Sundries.....	1,232 77	
Firemen.....	929 20	
Engineers.....	584 50	
Superintendence.....	442 00	
Care of grounds.....	428 70	
Labor on fuel.....	188 10	
Repairs on boilers.....	117 60	
Oil, waste and packing.....	106 34	
Barn expenses.....	84 33	
Real estate.....	64 25	
Lights.....	27 30	
Allis-Chalmers high-duty engine.....	21 76	
Worthington high-duty engine.....	16 80	
Horses, wagons, harnesses, etc.....	4 42	
		\$9,532 30
Amount carried forward.....		\$9,532 30

Amount brought forward.....		\$9,532 30
<b>SAND FILTRATION PLANT.</b>		
Installation.....	\$26,603 58	
Labor, pumping.....	1,735 60	
Cleaning beds.....	1,611 08	
Laboratory — labor and supplies.....	681 41	
Washing sand.....	406 35	
Miscellaneous supplies.....	251 02	
Care of grounds.....	45 00	
		31,336 64
<b>SOCKANOSSET RESERVOIR.</b>		
Sundries.....	\$355 85	
Watchman.....	182 00	
		537 85
<b>HOPE PUMPING STATION.</b>		
Coal and wood.....	\$1,138 39	
Engineers.....	45 29	
Firemen.....	406 40	
Sundries.....	258 48	
Lights.....	34 19	
Oil, waste and packing.....	15 53	
Holly pumping engine.....	1 43	
Repairs on boilers.....	35	
		2,312 56
<b>HOPE RESERVOIR.</b>		
Sundries.....	\$2,403 67	
Watchman.....	204 75	
		2,608 42
<b>FRUIT HILL RESERVOIR.</b>		
Sundries.....	\$473 81	
Watchman.....	182 00	
		655 81
<b>METER DEPARTMENT.</b>		
Water meters.....	\$2,035 22	
Setting and repairing meters.....	1,425 36	
		3,460 58
<b>PIPE LINE AND SERVICE STOPS.</b>		
Repairs.....	\$3,404 25	
Salaries of assistant engineers.....	1,011 13	
Superintendence — salaries.....	874 25	
Inspection of pipe line and services.....	732 30	
		6,021 93
Amount carried forward.....		\$56,466 09

REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 9

Amount brought forward..... \$56,466 09

PIPE YARD.

Cast iron water pipe.....	\$72,942 90	
Leading main from Sockanosset to city — to lay...	19,327 57	
Laying water pipe.....	11,248 12	
Special castings.....	8,188 64	
Fire hydrants, boxes and covers.....	3,115 53	
Stop valves.....	2,568 76	
Laying service pipe.....	1,497 01	
Service pipe.....	1,340 70	
Labor on and carting pipe.....	1,079 42	
Pig lead and tin.....	644 15	
Tools.....	476 67	
Tape and stops.....	406 60	
Pipe yard, office expenses.....	8 48	
		122,844 55

MISCELLANEOUS.

Clerks' and inspectors' salaries.....	\$1,752 40	
Barn expenses.....	853 43	
Prevention of defilement of the Pawtuxet.....	551 49	
Car fares.....	550 00	
Horses, wagons, harness, etc.....	464 61	
Telephone lines.....	122 68	
Sundries.....	5 89	
Public drinking fountains and troughs.....	5 08	
		4,305 58
		\$183,616 22

The total expenditures to June 30, 1906,  
inclusive, was . . . . . \$10,607,922.22

The *net* expenditure for maintenance from April 1 to June  
30, 1906, inclusive, was..... \$175,552 60

The *net* expenditure for maintenance to June 30, 1906, inclu-  
sive, was..... \$2,861,933 51

The value of the water works system  
January 1, 1906, as estimated by the city  
engineer, was as follows:

Pettaconset pumping station .....	\$340,694 00	
Hope pumping station .....	120,778 78	
Sockanosset, Hope and Fruit Hill reservoirs.....	691,498 68	
Main lines and distribution pipes.....	2,768,494 94	
Real estate in Pawtuxet and Lincoln .....	15,975 00	
Tools and supplies.....	39,161 63	
		\$3,976,603 03

Bills deposited with the city treasurer for collection from April 1 to June 30, 1906, inclusive, amounted to . . . \$89,796 58

As follows :

Water.....	\$81,887 40	
Water meters.....	3,780 25	
Labor and material, laying services, etc.....	1,901 18	
Setting and repairing meters.....	1,628 83	
Old scrap metals.....	282 45	
Repairs on pipe line.....	117 27	
Rent of real estate.....	105 50	
Penalties.....	42 00	
Empty meter cases.....	20 50	
<b>Permanently closing service stops.....</b>	<b>15 00</b>	
<b>Empty oil barrels.....</b>	<b>11 20</b>	
<b>Second hand drinking trough.....</b>	<b>5 00</b>	
		<b>\$89,796 58</b>

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$91,069 26

As follows :

Water.....	\$82,963 64	
Water meters.....	3,869 50	
Labor and material, laying services, etc.....	2,128 18	
Setting and repairing meters.....	1,509 02	
Old scrap metals.....	282 45	
Repairs on pipe line.....	117 27	
Rent of real estate.....	105 50	
Penalties.....	42 00	
Empty meter cases.....	20 50	
<b>Permanently closing service stops.....</b>	<b>15 00</b>	
<b>Empty oil barrels.....</b>	<b>11 20</b>	
<b>Second hand drinking trough.....</b>	<b>5 00</b>	
		<b>\$91,069 26</b>

## SEWERS.

Six drain layers' licenses were issued during the quarter. One drain layer has deceased. One license has been revoked. One license has been suspended. One hundred and thirty-five licenses were in force June 30, 1906.

During the quarter, three hundred and sixty permits were issued to drain layers — one hundred and ninety-five for new work and one hundred and sixty-five for extensions and repairs of drains.

June 18th, contracts for the construction of sewers were awarded to the following parties and subsequently executed, viz. :

[The amounts given below are what are estimated will be paid the contractors for labor, and do not include the cost of inspection and materials.]

TO FREDERICK E. SHAW.

No. of resolution. Date of approval.

208.	May 8, 1906,	<i>Plenty street, from the summit to Elmwood ave- nue ; in Linden street, from West Clifford about 80 feet northerly and in Sorrento street, from Union avenue to Wa- verly street . . . .</i>	\$847 50
------	--------------	--	----------

turn its  
over to  
Douglas  
Hansbrough  
turn its

*Winterly in Vrasie  
and Douglas avenue*

at present end of sewer  
about 270 feet west of

Hawkins street . . .  
Plainfield street, from

near Lowell avenue to  
Laurel Hill

**Sackett street, from Elm-**  
**wood avenue to Melrose**

Street . . . .

**\*1,464 85**

GEORGE B. NEWMAN

1.544 70

*Kelly street, from the*

708 40

angle in *Kelly street* to  
*Bancroft* and in *Long-*

748 60

mont street, from Salina  
to Admiral

140 00

212 May 8, 1906, *Kelly street, from the angle in Kelly street to Bancroft and in Longmont street, from Salina to Admiral . . . .* 748 60

748 60

**Providence Coal Company, for New River lump at sewage precipitation tanks, \$3.85 per net ton, delivered.**  
for New River lump and run of mine, \$3.45 and \$3.05 per net ton, respectively, and for anthracite \$5.20 per ton, all taken at company's yard.

**Eastern Coal Company, for anthracite at sewage precipitation tanks \$5.54 per net ton delivered.**



During the quarter, the construction of the following sewers was completed, namely :

No. of resolution.	Date of approval.	Date of completion
410.	Dec. 8, 1905, <i>Mas sie avenue, from Broad street to Baxter; in Baxter street, from Mas sie avenue to its southerly termination ; and in right of way from Baxter street to Oxford,</i>	June 19, 1906.
411.	" " " <i>Waverly street, from Cranston to Union avenue,</i>	June 2, 1906.
413.	" " " <i>Dixon street, from Sanford avenue to Elmwood,</i>	April 28, 1906.
414.	" " " <i>Handy street, from Amherst to Amsterdam,</i>	May 30, 1906.

Work upon the following sewers was in progress at the close of the quarter, namely :

No. of resolution.	Date of approval.	
68.	Feb. 7, 1905,	<i>Pleasant Valley Division, Section 31.</i>
409.	Dec. 8, 1905,	<i>Dora street, from about 100 feet east of Webster avenue to Priscilla and from about 100 feet east of Priscilla avenue to Whitehall street ; also in Wallace street, from Priscilla avenue to Whitehall street.</i>
412.	" " "	<i>Taber avenue, from Lloyd to President.</i>
417.	" " "	<i>Thayer street, from Barnes to Angell (storm sewer).</i>

209. May 8, 1906, *Veazie street, from its summit northwesterly to the sewer in Douglas avenue near Stansbury street and from its summit southeasterly in Veazie street and Douglas avenue to present end of sewer about [redacted] feet west of [redacted]* \$1,464 85
210. " " " *Pla [redacted] ld street, from near Lowell avenue to Laurel Hill . . . .* 1,544 70
211. " " " *Sackett street, from Elmwood avenue to Melrose street . . . .* 708 40

## TO GEORGE R. NEWMAN.

212. May 8, 1906, *Kelly street, from the angle in Kelly street to Bancroft and in Longmont street, from Sulina to Admiral . . . .* 748 60

June 21st, the following proposals were accepted for furnishing the coal required by the sewer department for one year ending July 1, 1907, viz. :

Providence Coal Company, for New River lump at sewage precipitation tanks, \$3.85 per net ton, delivered.  
for New River lump and run of mine, \$3.45 and \$3.05 per net ton, respectively, and for anthracite \$5.20 per ton, all taken at company's yard.

Eastern Coal Company, for anthracite at sewage precipitation tanks \$5.54 per net ton delivered.

During the quarter, the construction of the following sewers was completed, namely :

No. of resolution.	Date of approval.	Date of completion
410.	Dec. 8, 1905, <i>Massie avenue, from Broad street to Baxter; in Baxter street, from Massie avenue to its southerly termination ; and in right of way from Baxter street to Oxford,</i>	June 19, 1906.
411.	" " " <i>Waverly street, from Cranston to Union avenue,</i>	June 2, 1906.
413.	" " " <i>Dixon street, from Sanford avenue to Elmwood,</i>	April 28, 1906.
414.	" " " <i>Handy street, from Amherst to Amsterdam,</i>	May 30, 1906.

Work upon the following sewers was in progress at the close of the quarter, namely :

No. of resolution.	Date of approval.	
68.	Feb. 7, 1905,	<i>Pleasant Valley Division, Section 31.</i>
409.	Dec. 8, 1905,	<i>Dora street, from about 100 feet east of Webster avenue to Priscilla and from about 100 feet east of Priscilla avenue to Whitehall street ; also in Wallace street, from Priscilla avenue to Whitehall street.</i>
412.	" " "	<i>Taber avenue, from Lloyd to President.</i>
417.	" " "	<i>Thayer street, from Barnes to Angell (storm sewer).</i>

No. of resolution. Date of approval.

212. May 8, 1906, *Kelly street, from the angle in Kelly street to Bancroft street and in Longmont street, from Salina to Admiral.*

Work upon the following sewers, completing the work ordered by the city council, had not commenced June 30, 1906, namely :

No. of resolution. Date of approval.

288. Sept. 12, 1905, *West River street, from Cross to Burke and from West River street at Elk easterly through right of way about 530 feet to end of Section 22 of the improved sewerage system.*
415. Dec. 8, 1905, *Eudora street, from near Eddy to Poe, and in Poe street, from near Rhodes to Public.*
208. May 8, 1906, *Plenty street, from the summit to Elmwood avenue ; in Linden street, from West Clifford about 80 feet northerly and in Sorrento street from Union avenue to Waverly street.*
209. " " " *Veazie street, from its summit northwesterly to the sewer in Douglas avenue near Stansbury street and from its summit southeasterly in Veazie street and Douglas avenue to present end of sewer about 270 feet west of Hawkins street.*
210. " " " *Plainfield street, from near Lowell avenue to Laurel Hill.*
211. " " " *Sackett street, from Elmwood avenue to Melrose street.*

The amount of bills approved on account of sewers from April 1 to June 30, 1906, inclusive, was :

For construction, . . . . . \$54,580 39

Charged as follows :

Material.....	\$10,050 45
Contract reservations.....	438 00
Testing cement.....	308 86
Additional catch-basins.....	196 79
Sundries.....	161 50
Tools.....	60
Sewer in Dixon street, from Stamford avenue to Elmwood.....	527 08
Sewer in Dora and Wallace streets.....	1,052 31
Sewer in Handy street, from Amherst to Amsterdam .....	737 57
Sewer in Kelly and Longmont streets.....	101 97
Sewer in Massie avenue, Baxter street and in right of way.....	922 20
Sewer in Taber avenue, from Lloyd to President..	604 58
Sewer in Thayer street, from Barnes to Angell (storm sewer).....	1,766 43
Sewer in Waverly street, from Cranston to Union avenue .....	964 24
Sewer in Pleasant Valley Division, Section 31.....	36,747 81
	<hr/>
	\$54,580 39

For maintenance, . . . . . \$30,465 23

Classified as follows :

Cleaning basins and sewers.....	\$6,794 36
Repairing basins and sewers.....	2,793 10
Tools.....	965 71
Cleaning and repairing old drains.....	730 93
Inspection of connections.....	691 08
Barn expenses.....	508 22
Salary, superintendent.....	442 00
Sundries .....	389 18
Horses, wagons, harnesses, etc .....	247 07
Cleaning private connections.....	50 00
Telephone lines.....	35 93
Office expenses.....	12 86
Carfares.....	10 00
Repairs on gate house .....	8 40
	<hr/>
Amount carried forward.....	\$13,678 84

Amount brought forward..... \$13,678 84

**ERNEST STREET STATION.**

Coal and wood.....	1,318 10
Repairs on engines.....	1,016 82
Engineers.....	860 11
Cleaning screens.....	638 53
Firemen.....	430 47
Cleaning and repairing pumps.....	255 83
Care of grounds.....	116 81
Supplies.....	106 76
Repairs on boilers.....	20 96
Lights.....	15 10
Care of buildings.....	8 05
	<hr/>
	\$18,444 38

**SEWAGE PRECIPITATION TANKS.**

Chemicals.....	4,890 20
Labor in sludge disposal.....	2,556 03
Miscellaneous supplies.....	2,406 54
Labor on sewage precipitation.....	1,456 63
Electrical power.....	484 00
Repairs on machinery.....	141 01
Fuel.....	67 22
Lights.....	18 80
Repairs on buildings.....	42
	<hr/>
	\$30,465 23

The *net* expenditure for construction of sewers to June 30, 1906, inclusive, was..... \$7,855,866 32

The *net* expenditure for maintenance of sewers to June 30, 1906, inclusive, was..... \$1,328,384 30

Bills deposited with the city treasurer for collection from April 1 to June 30, 1906, inclusive, amounted to . . . \$862 45

As follows :

Miscellaneous work.....	\$278 78
Cleaning private connections.....	98 75
Old manhole frames and covers ..	17 15
One valve mould.....	10 00
Empty oil barrels.....	5 60
Sewer material.....	452 17
	<hr/>
	\$862 45

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of . . . . . \$759 19

As follows :

Miscellaneous work.....	\$195 77
Cleaning private connections.....	74 25
Old manhole frames and covers.....	20 50
One valve mould.....	10 00
Empty oil barrels.....	5 60
Sewer material.....	452 17
Testing cement.....	90
	<hr/>
	\$759 19

## HIGHWAYS.

Six permits to open highways were issued during the quarter.

April 23d, the proposal of Gaetano Cardarelli to furnish and deliver 1000 linear feet of granite curbing on Unit street for the sum of 55 cents per foot, was accepted.

April 27th, statements were prepared of the cost of curb-stones set, ascertained by the commissioner and certified to the board of aldermen for approval, as follows :

Barre street, from Ridge to Bell.....	\$1,715 51
Grand street, from Potters avenue to Huntington.....	856 69
Everett avenue, from Arlington to Elmgrove.....	1,488 29
Nebraska street, from Eddy to Rugby.....	600 70
Summit avenue, from Fourth to Seventh.....	1,043 03
	<hr/>
	\$5,704 22

June 9th, the proposal of the Narragansett Improvement Company to furnish and lay a wearing coat of Uralde sheet asphalt in Eddy street, from Westminster to Fulton, at \$1.50 per square yard, was accepted.

June 21st, the proposal of the Providence Coal Company to furnish at their yard the coal required by the highway department for one year ending July 1, 1907, was accepted as follows, viz.:

For New River run of mine \$3.05 per net ton, lump \$3.45 per net ton, anthracite \$5.20 per net ton.

During the quarter the following work was completed:

#### SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.

May	18,	1905,	<i>Narragansett avenue, from the city line northerly to a point about 120 feet north of Ardoene street.</i>
Sept.	21,	1905,	<i>Unit street, from Chalkstone avenue to Maynard street.</i>
Oct.	19,	1905,	<i>Summit avenue, from Fourth street to Seventh.</i>
Jan.	18,	1906,	<i>Andem street, from Canton to Bergen.</i>
"	"	"	<i>Dixon street, from Elmwood avenue to Stamford.</i>
"	"	"	<i>Grotto avenue, from Penrose to Irving.</i>
"	"	"	<i>Ralph street, from Eastwood avenue to Laban street.</i>
Feb.	15,	1906,	<i>What Cheer avenue, from Laurel Hill to Pocasset.</i>
"	"	"	<i>Arthur avenue and Dean street, from West Exchange to new bridge over tracks of the New York, New Haven and Hartford Railroad Company.</i>
May	17,	1905,	<i>Ellery street, from Wendell to Union avenue.</i>



PAVE WITH GRANITE BLOCKS.

May 5, 1905, *Sabin street, from West Exchange to Aborn.*

REMOVE OBSTRUCTIONS, GRADE AND PUT IN GOOD  
CONDITION.

Dec. 21, 1905, *Arthur avenue and Dean street, from  
West Exchange to new bridge over  
tracks of the New York, New Haven  
and Hartford Railroad Company.*

The following work was in progress June 30, 1906.

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.

Jan.	18,	1906,	<i>Handy street, from Amsterdam to Amherst.</i>
"	"	"	<i>Waverly street, from Union avenue to Cranston street.</i>
"	"	"	<i>Wallace street, from Priscilla avenue to Whitehall street.</i>

REMOVE OBSTRUCTIONS, GRADE AND PUT IN GOOD  
CONDITION.

Date of order.

May	18,	1905,	<i>Hope street, from Rochambeau avenue to the city line.</i>
Jan.	18,	1906,	<i>Crawford street, from South Water to South Main, and South Main street, from Crawford to Planet.</i>

The following work, ordered by the board of aldermen and city council, had not commenced June 30, 1906, namely:

### SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.

Jan.	18,	1906,	<i>Baxter street, from Massie avenue to its southerly termination.</i>
"	"	"	<i>Massie avenue, from Broad street to Baxter.</i>
"	"	"	<i>Taber avenue, from President to Lloyd.</i>
"	"	"	<i>Dora street from Webster avenue to Whitehall street.</i>
May	17,	1906,	<i>Sorrento street, from Union avenue to Waverly street.</i>
"	"	"	<i>Sackett street from Elmwood avenue to Melrose street.</i>
"	"	"	<i>Longmont street from Admiral to Salina.</i>
June	21,	1906,	<i>Eudora street from Eddy to Poe.</i>
"	"	"	<i>Poe street from Rhodes to Public.</i>
"	"	"	<i>Dean street from Cedar to West Exchange.</i>

### REMOVE OBSTRUCTIONS, GRADE AND PUT IN GOOD CONDITION.

Date of order.

June	21,	1906,	<i>River avenue, from Eaton street to Smith street.</i>
------	-----	-------	---

Bills approved on account of highways from April 1 to June 30, 1906, inclusive, amounted to:

Regular appropriation.....	\$105,628 60	
Special appropriation.....	6,919 23	
		<u>\$112,547 83</u>

## Classified as follows :

Cleaning streets.....	\$24,466 55	
Repairs on unpaved streets.....	17,349 92	
Crushed stone—material and labor.....	14,687 85	
Stone—paving and crosswalk.....	8,367 02	
Repairs on paved streets.....	4,591 97	
Barn expenses.....	3,088 91	
Blacksmith and wheelwright shop.....	2,536 61	
Watering streets.....	1,677 55	
Tools, implements, etc.....	744 67	
Repairs on stone crushers.....	714 53	
Labor on material.....	647 22	
Fencing streets—material and labor.....	591 36	
Sundries.....	572 04	
Horses, wagons, harnesses, etc.....	533 16	
Steam rollers—repairs and supplies.....	507 47	
Superintendent's salary.....	442 00	
Building driveways, etc.....	197 29	
Watchman at city yard.....	156 00	
Repairs on buildings, highway yard.....	42 54	
Office expenses, city yard.....	36 66	
Car fares.....	30 00	
Telephone lines.....	5 60	
		\$81,787 92

NEW WORK — BUILDING AND REBUILDING  
STREETS, ETC.

## SIDEWALKS CURBED AND GUTTERS PAVED.

<i>Andem street</i> , from Canton to Bergen.....	\$1,484 48	
<i>Dixon street</i> , from Elmwood avenue to Stamford...	922 63	
<i>Ellery street</i> , from Wendell to Union avenue.....	1,753 53	
<i>Grotto avenue</i> , from Penrose to Irving.....	1,381 69	
<i>Handy street</i> , from Amsterdam to Amherst.....	727 72	
<i>Narragansett avenue</i> , from city line northerly to a point about 120 feet north of Ardoene street.....	2,422 69	
<i>Ralph street</i> , from Eastwood avenue to Laban street	501 88	
<i>Summit avenue</i> , from Fourth street to Seventh...	312 66	
<i>Unit street</i> , from Chalkstone avenue to Maynard street.....	4,378 40	
<i>Wallace street</i> , from Priscilla avenue to Whitehall street.....	271 58	
<i>Waverly street</i> , from Union avenue to Cranston street.....	1,895 71	
<i>What Cheer avenue</i> , from Laurel Hill to Pocasset..	1,941 44	
		17,974 43
Amount carried forward.....		\$99,762 35

Amount brought forward.....	\$99,782 3
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## PAVE WITH GRANITE BLOCKS.

<i>Sabin street</i> , from West Exchange to Aborn.....	5,007 91
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## REMOVE OBSTRUCTIONS, GRADE AND PUT IN GOOD CONDITION.

<i>Hope street</i> , from Rochambeau avenue to city line..	\$838 34
<i>Crawford street</i> , from South Water to South Main, and South Main street, from Crawford to Planet	6,919 23
	<u>7,757 57</u>
	\$112,547 83

Bills deposited with the city treasurer for collection from April 1 to June 30, 1906, inclusive, amounted to . . . . \$2,577 80

## As follows :

Labor and material.....	\$1,175 73
Blacksmith and harness work for other departments.....	550 80
Street sweepings.....	317 35
Building driveways, etc.....	253 82
Boarding horses for other departments.....	185 90
Manure from barn.....	72 00
Removing tree .....	10 00
Empty oil barrels.....	8 20
Old rubber belting.....	4 00
	<u>\$2,577 80</u>

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$1,953 10

## As follows :

Labor and material.....	\$700 08
Blacksmith and harness work for other departments .....	487 63
Street sweepings.....	317 35
Boarding horses for other departments.....	185 90
Building driveways, etc.....	167 92
Manure from barn.....	72 00
Removing tree.....	10 00
Empty oil barrels.....	8 20
Old rubber belting.....	4 00
	<u>\$1,953 10.</u>

## SIDEWALKS AND CURBING.

Bills approved on account of sidewalks  
and curbing from April 1 to June 30,  
1906, inclusive, amounted to . . . \$11,186 77

## Charged as follows :

Granite curbing.....	\$9,353 67
Concreting sidewalks.....	1,833 10
	<hr/>
	\$11,186 77

Bills deposited with the city treasurer  
for collection from April 1 to June 30,  
1906, inclusive, amounted to . . . \$5,909 98

## As follows :

Curbing bills.....	\$5,704 22
Granite curbing.....	189 36
Concreting sidewalks.....	16 40
	<hr/>
	\$5,909 98

During the quarter, coupons from bills  
collected have been returned by the city  
treasurer and receipted for to the amount of \$6,202 61

## As follows :

Curbing bills.....	\$6,087 72
Granite curbing.....	98 49
Concreting sidewalks.....	16 40
	<hr/>
	\$6,202 61

### CITY ENGINEER.

Bills approved on account of the city engineer's department from April 1 to June 30, 1906, inclusive, amounted to . . . \$11,025 75

Charged as follows :

Salary—city engineer.....	\$1,125 00
Salaries of assistants.....	8,417 36
Salaries of clerks.....	813 75
Car fares.....	402 35
Instruments and repairs.....	117 88
Supplies, drawing material, etc.....	113 72
Telephone lines.....	25 70
Carriage hire.....	6 90
Sundries.....	2 09
Meteorological instruments and repairs.....	1 00
	<hr/>
	\$11,025 75

### .BRIDGES.

April 6th, the proposal of the Pittsburgh Testing Laboratory, Limited, to inspect the material for the superstructures of the Point street and Smithfield avenue bridges for the sum of thirty cents per ton for mill inspection, and forty cents per ton for shop inspection, was accepted.

May 5th, the proposal of William M. Harris Jr., to furnish and deliver at the city yard 42,000 feet of white oak plank of various widths and lengths for \$29.90 per M., was accepted.

June 21st, proposals for furnishing and delivering the coal required by the various bridges for one year to July 1, 1907, were accepted as follows, viz.:

Providence Coal Company, for New River lump,.....\$3.85 per net ton.  
 Eastern Coal Company, for Anthracite..... 5.54 per net ton.

Bills approved on account of bridges from  
 April 1 to June 30, 1906, inclusive,  
 amounted to . . . . . \$4,981 44

Charged as follows:

Barn expenses.....	\$127 94
Branch avenue bridge.....	2 35
Carfares.....	25 00
Crawford street bridge.....	17 45
Horses, wagons, harnesses, etc.....	14 70
Lumber, hardware, etc.....	420 88
Manton avenue bridge.....	37 55
Merino bridge.....	114 08
Mill street bridge.....	6 30
Nash lane bridge.....	108 10
Point street bridge.....	663 67
Promenade street bridge.....	14 85
Randall street bridge.....	4 80
Red bridge.....	584 27
Rent of keeper's house— Washington bridge.....	36 00
Salaries — Point street bridge.....	978 25
Salaries — Red bridge.....	513 50
Salaries — Washington bridge .....	523 10
Smithfield avenue bridge.....	23 28
Sundries.....	69 92
Telephone lines.....	2 68
Tools.....	93 15
Veazie street bridge.....	3 52
Wanskuck bridge.....	15 71
Washington bridge.....	142 64
Washington row bridge.....	2 70
Weybosset bridge.....	100 05
Whelden street bridge.....	335 00
	<hr/>
	\$4,981 44

Bills deposited with the city treasurer for  
 collection (for old lumber), from April 1 to  
 June 30, 1906, inclusive, amounted to . \$4 50

During the quarter, coupons from bills collected (for old lumber), have been returned by the city treasurer, and receipted for to the amount of . . . . \$4 50

Bills approved for account of rebuilding abutments, piers and superstructure of Point street bridge, from April 1 to June 30, 1906, inclusive, have . . . . d from the special appropriation for that work, to the amount of . . . . \$18,200 74

### PUBLIC LIGHTS.

Bills approved on account of the public lights from April 1 to June 30, 1906, inclusive, amounted to . . . . \$69,299 56

#### Charged as follows :

Arc lights.....	\$49,457 91
Incandescent lights.....	13,161 87
Welsbach lights.....	6,366 68
Salaries.....	295 00
Car fares.....	10 00
Setting and removing gas posts.....	7 75
Supplies for repairing posts and lanterns.....	35
	<hr/>
	\$69,299 56

Bills deposited with the city treasurer for collection from April 1 to June 30, 1906, inclusive, amounted to . . . . \$12 00



## As follows :

One gas post.....	\$8 00
Changing location of gas post.....	4 00
	<u>\$12 00</u>

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$12 00

One gas post.....	\$8 00
Changing location of gas post.....	4 00
	<u>\$12 00</u>

## PUBLIC WORKS OFFICE.

Bills approved on account of the public works office from April 1 to June 30, 1906, inclusive, amounted to . . . \$4,968 74

## Charged as follows :

Salaries of commissioner and secretary.....	\$1,850 00
Salaries of office assistants.....	2,999 98
Office supplies.....	98 81
Telephone lines.....	19 95
	<u>\$4,968 74</u>

ABOLISHING GRADE CROSSING AT GROVE  
STREET, ETC.

Bills approved for account of building approaches to Arthur avenue bridge, from April 1 to June 30, 1906, inclusive, have been paid from the special appropriation for that work to the amount of . . .

\$6,234 59

WALTER F. SLADE,

*Commissioner.*

MAR 1 1907

1906.]

CITY DOCUMENT.

NINETY-FIFTH  
QUARTERLY REPORT

OF THE

★ Department of Public Works

OF THE

CITY OF PROVIDENCE, R. I.

QUARTER ENDING SEPTEMBER 30, 1906.



The Providence Press:  
SNOW & FARNHAM, CITY PRINTERS,  
63 Washington Street,  
1906.

MAY 1 1907

1906.]

CITY DOCUMENT.

NINETY-FIFTH  
QUARTERLY REPORT

OF THE

Department of Public

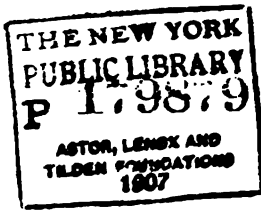
OF THE

CITY OF PROVIDENCE, R.

QUARTER ENDING SEPTEMBER 3



The Providence Press:  
SNOW & FARNHAM, CITY PRINTERS,  
63 Washington Street,  
1906.



# REPORT.

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OFFICE OF THE DEPARTMENT OF PUBLIC WORKS, }  
CITY HALL, PROVIDENCE, R. I., October 1, 1906. }

TO THE HONORABLE THE CITY COUNCIL:

In compliance with the requirements of Chapter 41 of the ordinances, the Commissioner of Public Works respectfully presents the ninety-fifth quarterly report of the expenditures by the several departments under his direction and control, with statements of work ordered and the condition and cost of same, for the quarter ending September 30, 1906.

## WATER WORKS.

July 9th, the proposal of Charles Crankshaw to do the extra grading in connection with the laying of a water main in River avenue, between Eaton and Smith streets, for the sum of thirty five cents per cubic yard, was accepted.

The proposal of Lucien Lalime to move, raise and repair a building located on the right of way for the 42-inch leading main in the town of Cranston, for the sum of \$1,200.00, was accepted.

July 12th, the proposal of the Coffin Valve Company to furnish and deliver at the city yard fourteen 16-inch vertical bell-end water gates with spur gears and by-passes, twelve 16-inch bevel-gear horizontal gates, four 12-inch vertical gates without gears, and one 12-inch bronze mounted check valve, was accepted by the Commissioner. Amount, \$2,193.00.

July 14th, the proposal of the Coffin Valve Company to furnish and deliver fourteen indicators for 16-inch water gates at \$15.00 each, was accepted.

July 18th, the proposal of the Coffin Valve Company to furnish and deliver at the city yard thirty-two special high-service fire hydrants complete with gates, etc., at \$148.80 each, and six additional gates at \$33.00 each, was accepted.

The average daily consumption of water during the last quarter was 15,625,207 gallons.

Water pipes were laid during the quarter as follows:

24-INCH.	
In Broadway and Harris avenue.....	3,110.87 feet.
16-INCH.	
In Admiral street and River avenue.....	3,101.25 feet.
12-INCH.	
In Allens and River avenues; in Cranston street and Dyer avenue in the town of Cranston.....	509.88 feet.
10-INCH.	
In Admiral street.....	5.64 feet.
8-INCH.	
In Admiral and Eaton streets and Harris avenue; in Dyer avenue in the town of Cranston; and in Smith street in the town of North Providence.....	6,233.81 feet.
6-INCH.	
In Bullfinch court, Dora, Eudora, Eaton, Forest, Lauriston, Poe, Social, Sorrento and Tell streets; Elmgrove and Pennington avenues; in Bailey and Cato streets, and Windsor road in the town of Cranston; in Cecil and Grover streets in the town of Johnston; and in Fruit Hill and Greenville avenues in the town of North Providence.....	4,671.24 feet.
Total.....	17,632.69 feet

or, 3.339 + miles.

Water pipes have been removed during the quarter as follows:

8-INCH.	
From Cranston street in the town of Cranston.....	303.04 feet.
6-INCH.	
From Dyer avenue in the town of Cranston.....	15.65 feet.
Total .....	318.69 feet.

or .060 + miles.

Statement of sizes and lengths of pipe laid since the commencement of the work :

42-inch.....	4,979.49 feet.
36-inch.....	10,207.57 feet.
30-inch.....	61,328.30 feet.
24-inch.....	46,404.73 feet.
20-inch.....	9,626.59 feet.
16-inch.....	37,429.20 feet.
12-inch.....	112,328.04 feet.
10-inch.....	15,062.78 feet.
8-inch.....	310,067.61 feet.
6-inch.....	1,277,259.24 feet.
Total.....	1,884,693.55 feet.

or, 356.949 + miles.

Statement of sizes and lengths of pipe laid for the special water service for fire protection since the commencement of the work :

24-inch .....	4,297.46 feet.
16-inch .....	23,004.37 feet.
12-inch .....	2,215.76 feet.
Total. ....	29,517.59 feet.

or, 5.59 + miles.

Twenty-one fire hydrants were set during the quarter, one in each of the following locations :

- Ashton street, north side, 71 feet east of Silver Spring street.
- Broadway, southeast corner of Howard street.
- Broadway, northeast corner of Barton street.
- Broadway, south side, 170 feet east of Harkness street.
- Broadway, south side, southwest corner of Marshall street.



Broadway, south side, southeast corner of Courtland street.  
Broadway, south side, about 80 feet west of Knight street.  
Endora street, north side, 164 feet west of building line of Poe street.  
Greenville avenue, North Providence, 260 feet north of gate on north line of Metcalf avenue.  
Greenville avenue, North Providence, on south line of Packard avenue.  
Grover street, North Providence, north side, 280 feet west of River avenue.  
Metcalf avenue, southeast corner of Ashton street.  
Princess avenue, Cranston, east side, southeast corner of Puritan avenue.  
River avenue, east side, 17 feet north of building line of Eaton street.  
River avenue, east side, 482½ feet north of building line of Eaton street.  
Smith street, North Providence, south side, on west building line of East avenue.  
Smith street, North Providence, south side, 5 feet west of Allendale road.  
Smith street, North Providence, south side, 55 feet east of Sampson avenue.  
Smith street, North Providence, south side, 10 feet west of building line of Fruit Hill avenue.  
Smith street, North Providence, south side, southeast corner of Olney lane.  
Woodward road, east side, on south building line of Veazie street.

One fire hydrant was removed during the quarter, from Northup avenue, north side, on the east line of Silver Spring street.

The total number of fire hydrants, exclusive of those for special service for fire protection, is now two thousand and ninety-five — nineteen hundred and sixty-six flush, and one hundred and twenty-nine post.

The total number of fire hydrants on the special water service for fire protection is ninety-two.

During the quarter, two hundred and forty water meters were set, of which number forty-nine were to replace other meters. The use of twenty-one meters was discontinued.

The following meters were in use at the close of the quarter :

KIND.	SIZE.									Total.
	$\frac{3}{8}$ -in.	$\frac{1}{2}$ -in.	1-in.	1 $\frac{1}{2}$ -in.	2-in.	3-in.	4-in.	6-in.	8-in.	
Ball & Fitts.....	1,755	361	87	9	4					2,216
Ball & Fitts, rotary.....			4	5		2	1			12
Crown.....	9,801	1,235	365	165	50	32	28	1		11,677
Empire.....	1,514	186	78	52	14	1	1			1,846
Fales, Jenks & Sons.....			1							1
Gem.....					17	31	19	4		71
Hersey.....	24									24
Nash.....	320									320
Thomson.....	4,817	422	74	54	22	7	7	1		5,404
Trident.....	103		1							104
Venturi.....									1	1
	18,334	2,204	610	285	107	73	56	6	1	21,676

Four plumber's licenses were issued during the quarter.. The total number of licenses in force September 30, 1906, was one hundred and twenty-six.

Seven hundred permits to do plumbing were issued during the quarter.

One hundred and eighty applications for water were made during the quarter, making the total number twenty-seven thousand eight hundred and fifty-five.

The number of new service stops opened during the quarter was one hundred and eighty-one.

The total number of service stops opened to September 30, 1906, inclusive, was twenty-seven thousand one hundred and forty-nine. The number in actual use September 30, 1906, was twenty-five thousand and thirty-three.

The amount of bills approved on account of water works from July 1, to September 30, 1906, inclusive, was:

For maintenance, . . . . . \$103,086 64

Classified as follows:

**PETTACONSET PUMPING STATION.**

Coal and wood.....	\$2,549 33	
Firemen.....	916 20	
Sundries.....	722 83	
Engineers.....	630 50	
Superintendence.....	442 00	
Care of grounds.....	256 64	
Oil, waste and packing.....	153 50	
Barn expenses.....	88 12	
Labor on fuel.....	63 60	
Allis-Chalmers high-duty engine.....	51 84	
Real estate.....	19 70	
Lights.....	19 33	
Repairs on boilers.....	19 11	
Cornish engine house.....	14 40	
Worthington high-duty engine.....	1 60	
Horses, wagons, harnesses, etc.....	1 25	
		\$5,949 85

**SAND FILTRATION PLANT.**

Installation.....	\$8,222 48	
Labor and supplies, pumping.....	2,000 97	
Cleaning beds.....	1,120 33	
Laboratory — labor and supplies.....	488 84	
Miscellaneous supplies.....	544 00	
Care of grounds.....	106 41	
		12,472 93

**SUCKANUSSET RESERVOIR.**

Worthington.....	\$182 60	
Sundries.....	87 94	
		270 54

**HUTCH PUMPING STATION.**

Engineers.....	\$211 00	
Firemen.....	28 70	
Hutchinson engine.....	258 40	
Oil and waste.....	27 65	
Lights.....	24 41	
Sundries.....	22 88	
Repairs on engine.....	14 18	
Repairs on building.....	1 77	
		729 99
		12,472 93
Amount carried forward.....		25,675 77

REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 9

Amount brought forward.....		\$20,051.09
HOPE RESERVOIR.		
Sundries.....	\$9,602 64	
Watchman.....	204 75	
		9,807 39
. FRUIT HILL RESERVOIR.		
Sundries.....	\$353 15	
Watchman.....	182 00	
		535 15
METER DEPARTMENT.		
Water meters.....	\$2,688 62	
Setting and repairing meters.....	1,425 83	
		4,114 45
PIPE LINE AND SERVICE STOPS.		
Repairs.....	\$2,917 21	
Salaries of assistant engineers.....	1,810 00	
Superintendence—salaries.....	874 25	
Inspection of pipe line and services.....	796 38	
		6,396 84
PIPE YARD.		
Cast iron water pipe.....	\$28,242 03	
Leading main from Sockanosset to city—to lay....	15,975 01	
Laying water pipe.....	7,287 10	
Special castings.....	3,346 07	
Laying service pipe.....	1,663 47	
Pig lead and tin.....	1,035 80	
Labor on and carting pipe.....	717 02	
Service pipe.....	458 22	
Tools.....	251 32	
Stop valves.....	44 33	
Pipe yard, office expenses.....	18 26	
		59,036 65
MISCELLANEOUS.		
Clerks' and inspectors' salaries.....	\$1,752 40	
Prevention of defilement of the Pawtuxet.....	549 99	
Barn expenses.....	476 50	
Car fares.....	180 00	
Telephone lines.....	125 68	
Real estate in Lincoln.....	30 00	
Public drinking fountains and troughs.....	28 50	
		3,143 07
		\$103,086 64

The total expenditures to September 30,  
1906, inclusive, was . . . . \$10,711,008 86

The *net* expenditure for maintenance from July 1, to Sep-  
tember 30, 1906,, inclusive, was..... \$25,823 40

The *net* expenditure for maintenance to September 30, 1906,  
inclusive, was..... \$2,957,555 91

The value of the water works system  
January 1, 1906, as estimated by the  
city engineer, was as follows :

Pettaconset pumping station.....	\$340,694 00
Hope pumping station.....	120,778 78
Sockanosset, Hope and Fruit Hill Reservoirs.....	691,498 68
Main lines and distribution pipes.....	2,768,494 94
Real estate in Pawtuxet and Lincoln.....	15,975 00
Tools and supplies.....	39,161 63
	<hr/>
	\$3,976,603 03

Bills deposited with the city treasurer for  
collection from July 1 to September 30,  
1906, inclusive, amounted to . . . \$89,261 51

As follows :

Water.....	\$81,571 28
Water meters.....	4,275 00
Setting and repairing meters.....	1,928 39
Labor and material, laying services, etc.....	1,128 91
Repairs on pipe line.....	196 25
Rent of real estate.....	106 48
Penalties.....	42 00
Permanently closing service stops.....	10 00
Empty oil barrels.....	3 20
	<hr/>
	\$89,261 51

During the quarter, coupons from bills  
collected have been returned by the city  
treasurer and receipted for to the amount of \$122,662 23

As follows :

Water.....	\$115,155 99
Water meters.....	4,274 50
Setting and repairing meters.....	1,876 26
Labor and material, laying services, etc.....	998 69
Repairs on pipe line.....	216 86
Rent of real estate.....	84 73
Penalties.....	42 00
Permanently closing service stops.....	10 00
Empty oil barrels.....	3 20
	<hr/>
	\$122,662 23

The amount of bills, approved on account  
of water works for the fiscal year ending  
September 30, 1906, inclusive, was:

For maintenance, . . . . . \$530,000 00

Classified as follows:

PETTACONSET PUMPING STATION.

Allis-Chalmers high-duty engine, to furnish and erect.....	\$19,497 81	
Coal and wood.....	19,319 55	
Sundries.....	5,064 38	
Real estate.....	4,010 23	
Cornish engine house.....	3,897 87	
Firemen.....	3,595 40	
Engineers.....	2,476 46	
Lights.....	1,763 38	
Superintendence.....	1,742 00	
Care of grounds.....	822 74	
Corliss pumping engine and house.....	620 10	
Oil, waste and packing.....	610 68	
Labor on fuel.....	408 70	
Repairs on boilers.....	327 14	
Barn expenses.....	316 79	
Horses, wagons, harnesses, etc. ....	306 18	
Worthington high-duty engine.....	131 25	
Allis-Chalmers high-duty engine.....	73 60	
	<hr/>	\$64,984 26
Amount carried forward.....		<hr/>
		\$64,984 26

Amount brought forward..... \$649

**SAND FILTRATION PLANT.**

Installation .....	\$76,717 15
Cleaning beds.....	7,307 74
Labor and supplies, pumping.....	6,621 17
Laboratory, labor and supplies.....	2,506 35
Miscellaneous supplies.....	2,113 20
Washing sand.....	408 35
Care of grounds.....	239 01

85,912 55

**SOCKANOSSET RESERVOIR.**

Sundries .....	\$2,735 90
Watchman.....	728 00

3,463 90

**HOPE PUMPING STATION.**

Engineers.....	\$1,592 00
Firemen.....	1,562 94
Coal and wood.....	1,375 04
Sundries .....	360 25
Holly pumping engine.....	263 72
Lights.....	219 07
Oil, waste and packing.....	33 53
Repairs on boilers.....	27 54
Nagle pumping engine.....	14 18

5,448 21

**HOPE RESERVOIR.**

Sundries .....	\$12,063 21
Watchman .....	819 00

12,882 21

**FRUIT HILL RESERVOIR.**

Sundries .....	\$1,580 83
Watchman.....	728 00

2,308 83

**METER DEPARTMENT.**

Water meters.....	\$12,624 83
Setting and repairing meters.....	5,666 01

18,290 84

Amount carried forward.....

\$303,291 21

# REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 13

Amount brought forward..... \$203,291 28

## PIPE LINE AND SERVICE STOPS.

Repairs.....	\$15,038 99	
Inspection of pipe line and services.....	4,164 26	
Superintendence—salaries.....	3,497 00	
Salaries of assistant engineers.....	2,821 13	
		25,521 38

## PIPE YARD.

Cast iron water pipe.....	\$166,573 34	
Leading main from Sockanosset to city—to lay....	38,454 53	
Laying water pipe.....	24,633 24	
Special castings.....	14,414 47	
Stop valves.....	8,960 67	
Laying service pipe.....	6,012 00	
Fire hydrants, boxes and covers.....	4,456 38	
Service pipe.....	3,723 03	
Labor on and carting pipe.....	2,883 64	
Pig lead and tin.....	2,304 73	
Taps and stops.....	1,936 99	
Tools.....	1,265 57	
Laying 42-inch force main from Pettaconset to Sockanosset.....	521 75	
Pipe yard, office expenses.....	155 36	
Repairs on pipe yard buildings.....	27 98	
Patterns for special castings.....	14 00	
		276,337 68

## MISCELLANEOUS.

Town of Cranston, tax.....	\$8,310 88	
Clerks' and inspectors' salaries.....	6,985 60	
Barn expenses.....	2,618 21	
Prevention of defilement of the Pawtuxet.....	2,201 46	
Car fares.....	1,435 00	
Horses, wagons, harnesses, etc.....	1,367 15	
Telephone lines.....	1,275 96	
Town of North Providence, tax.....	408 00	
Public drinking fountains and troughs.....	103 58	
Real estate at Pawtuxet.....	67 50	
Sundries.....	54 32	
Real estate in Lincoln.....	30 00	
		24,849 66
		\$530,000 00



## SEWERS.

Four drain layer's licenses were issued during the quarter. The total number of licenses in force September 30, 1906, was one hundred and thirty-nine.

During the quarter, two hundred and seventy-nine permits were issued to drain layers—one hundred and forty-five for new work and one hundred and thirty-four for extensions and repairs of drains.

July 20th, ordered of James C. Goff Company, one cargo of Sanford bricks at \$10.00 per M., delivered in the city yard.

August 3d, the proposal of John R. White and Son to furnish the New River coal required at Ernest street pumping station for the year ending July 1, 1907, at \$3.45 per net ton delivered, was accepted.

September 11th, contracts for the construction of sewers were awarded to the following parties and subsequently executed, viz.:

[The amounts given below are what are estimated will be paid the contractors for labor, and do not include the cost of inspection and materials.]

## TO FREDERICK E. SHAW.

No. of resolution. Date of approval.

358.	Aug. 3, 1906,	<i>Mount Pleasant avenue</i>	
		<i>from Atwells to Dover</i>	
		<i>street, . . . . .</i>	\$1,410 40
359.	" " "	<i>Progress avenue from</i>	
		<i>Webster to Whitehall</i>	
		<i>street, . . . . .</i>	848 20
360.	" " "	<i>Waterloo street from near</i>	
		<i>Parade to Dexter, . . . . .</i>	279 80

## TO FRANK A. GAMMINO.

357. Aug. 3, 1906, *McKinley street from Elmwood avenue to Alger*, \$1,023 90

September 28th, the proposal of L. F. Pease Company, to furnish and deliver in this city 15,000 yards of 10½-ounce cotton duck 40 inches wide for the sum of 14½ cents per yard, was accepted.

During the quarter, the construction of the following sewers was completed, namely :

No. of Resolution.	Date of approval.		Date of completion.
409.	Dec. 8, 1905,	<i>Dora street, from about 100 feet east of Webster avenue to Priscilla, and from about 100 feet east of Priscilla avenue to Whitehall street ; also in Wallace street, from Priscilla avenue to Whitehall street. . . .</i>	July 12, 1906.
412.	Dec. 8, 1905,	<i>Taber avenue, from Lloyd to President. . . .</i>	July 2, 1906.
415.	" " "	<i>Eudora street, from near Eddy to Poe, and in Poe street, from near Rhodes to Public. . . .</i>	Aug. 9, 1906.
417.	" " "	<i>Thayer street, from Barnes to Angell (storm sewer) . . . .</i>	July 17, 1906.
208.	May 8, 1906,	<i>Plenty street, from the summit to Elmwood avenue ; in Linden street, from West Clifford about 80 feet northerly and in Sorrento street from Union avenue to Waverly. . . .</i>	Sept. 24, 1906.

No. of resolution.	Date of approval.	Date of completion.
211.	May 8, 1906,	<i>Sackett street, from Elmwood avenue to Melrose street.</i> . . . . Aug. 11, 1906.
212.	" " "	<i>Kelly street, from the angle in Kelly street to Bancroft, and in Longmont street, from Salina to Admiral.</i> . . . . Aug. 4, 1906

Work upon the following sewers was in progress at the close of the quarter, namely :

No. of resolution.	Date of approval.	
68.	Feb. 7, 1905,	<i>Pleasant Valley Division, Section 31.</i>
209.	May 8, 1906,	<i>Veazie street, from its summit northwesterly to the sewer in Douglas avenue near Stansbury street and from its summit southeasterly in Veazie street and Douglas avenue to present end of sewer about 270 feet west of Hawkins street.</i>
357.	Aug. 3, 1906,	<i>McKinley street from Elmwood avenue to Alger.</i>
360.	" " "	<i>Waterloo street, from near Parade to Dexter.</i>
373.	Sept. 11, 1906,	<i>Exchange place, from near present end of sewer to about 200 feet northerly, in front of the new post office building.</i>

Work upon the following sewers, completing the work ordered by the city council, had not commenced September 30, 1906, namely :

No. of resolution. Date of approval.

288. Sept. 12, 1905, *West River street, from Cross to Burke, and from West River street at Elk easterly through right of way about 530 feet to end of Section 22 of the improved sewerage system.*
210. May 8, 1906, *Plainfield street, from near Lowell avenue to Laurel Hill.*
358. Aug. 3, 1906, *Mount Pleasant avenue, from Atwells to Dover street.*
359. " " " *Progress avenue, from Webster to Whitehall street.*

The amount of bills approved on account of sewers from July 1 to September 30, 1906, inclusive, was :

For construction, . . . . . \$36,551 33

Charged as follows :

Contract reservations.....	\$10,381 00
Material.....	4,603 25
Additional catch-basins.....	540 48
Testing cement.....	301 25
Sundries.....	163 72
Tools.....	75
Sewer in Dixon street, from Stamford avenue to Elmwood .....	7 50
Sewer in Dora and Wallace streets.....	415 83
Sewer in Eudora and Poe streets.....	926 80
Sewer in Exchange place, in front of new post office building.....	49 17
Sewer in Handy street, from Amhurst to Amsterdam.....	5 25
Sewer in Kelly and Longmont streets.....	903 98
Sewer in Massie avenue, Baxter street, and in right of way.....	15 00
Sewer in McKinley street, from Elmwood avenue to Alger.....	332 53
Sewer in Plenty, Linden and Sorrento streets.....	1,002 18
Sewer in Sackett street, from Elmwood avenue to Melrose street.....	855 02
Sewer in Taber avenue, from Lloyd to President..	9 02
Sewer in Thayer street, from Barnes to Angell (storm sewer).....	3,070 28
Amount carried forward.....	\$23,583 01

Amount brought forward.....	\$23,583 01
Sewer in Veazie street and Douglas avenue.....	1,090 17
Sewer in Waterloo street, from near Parade to Dexter.....	306 13
Sewer in Waverly street, from Cranston to Union avenue.....	15 00
Sewer in Pleasant Valley Division, Section 31.....	11,557 02
	<u>\$36,551 33</u>

For maintenance, . . . . . \$31,942 51

Classified as follows:

Cleaning basins and sewers.....	\$7,821 39
Repairing basins and sewers.....	4,924 00
Tools.....	1,136 60
Sundries.....	1,056 99
Inspection of connections.....	693 03
Cleaning and repairing old drains.....	563 96
Salary; superintendent.....	442 00
Barn expenses.....	272 03
Horses, wagons, harnesses, etc.....	145 27
Cleaning private connections.....	39 50
Telephone lines.....	35 93
Filling cisterns, etc.....	10 00
Office expenses.....	9 60

ERNEST STREET STATION.

Coal and wood.....	1,287 00
Engineers.....	869 39
Cleaning screens.....	627 66
Cleaning and repairing pumps.....	535 85
Firemen.....	416 94
Care of grounds.....	119 59
Supplies.....	67 43
Repairs on engines.....	44 89
Lights.....	42 06
Care of buildings.....	19 11

SEWAGE PRECIPITATION TANKS.

Chemicals.....	5,968 50
Labor in sludge disposal.....	2,322 96
Labor on sewage precipitation.....	1,557 08
Electrical power.....	527 50
Miscellaneous supplies.....	187 87
Repairs on tanks.....	90 00
Fuel.....	78 76
Lights.....	20 25
Repairs on machinery.....	19 37

\$31,942 51

The net expenditure for construction of sewers to September 30, 1906, inclusive, was.....

The net expenditure for maintenance of sewers to September 30, 1906, inclusive, was.....

\$7,890,896 27

\$1,359,861 83

Bills deposited with the city treasurer  
for collection from July 1 to September 30,  
1906, inclusive, amounted to . . . \$2,340 12

As follows:

Miscellaneous work.....	\$724 42
Cleaning private connections.....	58 00
Old manhole frames and covers.....	27 95
Pumping out cellar.....	10 00
Sewer material.....	1,518,55
Testing cement.....	1 20
	<hr/>
	\$2,340 12

During the quarter, coupons from bills  
collected have been returned by the city  
treasurer and receipted for to the amount  
of . . . \$1,994 61

As follows:

Miscellaneous work.....	\$369 71
Cleaning private connections.....	67 50
Old manhole frames and covers.....	27 95
Pumping out cellar.....	10 00
Sewer material.....	1,518 25
Testing cement.....	1 20
	<hr/>
	\$1,994 61

The amount of bills approved on account of sewers for  
the fiscal year ending September 30, 1906, inclusive, was as  
follows:

For construction, . . . \$169,940 06

Charged as follows:

Material.....	\$22,043 32
Contract reservations.....	12,284 00
Additional catch-basins.....	1,252 69
Testing cement.....	1,195 47
Sundries.....	905 52
Tools.....	8 02
Sewer in Andem street, from Canton to Bergen....	764 67
Sewer in Blackstone boulevard, west side, from north line of Glen avenue southerly to present end of sewer.....	734 08
	<hr/>
Amount carried forward.....	\$39,187 77

No. of resolution.	Date of approval.	Date of completion.
211.	May 8, 1906, <i>Sackett street, from Elmwood avenue to Melrose street.</i>	Aug. 11, 1906.
212.	" " " <i>Kelly street, from the angle in Kelly street to Bancroft, and in Longmont street, from Salina to Admiral.</i>	Aug. 4, 1906

Work upon the following sewers was in progress at the close of the quarter, namely :

No. of resolution.	Date of approval.	
68.	Feb. 7, 1905,	<i>Pleasant Valley Division, Section 31.</i>
209.	May 8, 1906,	<i>Veazie street, from its summit northwesterly to the sewer in Douglas avenue near Stansbury street and from its summit southeasterly in Veazie street and Douglas avenue to present end of sewer about 270 feet west of Hawkins street.</i>
357.	Aug. 3, 1906,	<i>McKinley street from Elmwood avenue to Alger.</i>
360.	" " "	<i>Waterloo street, from near Parade to Dexter.</i>
373.	Sept. 11, 1906,	<i>Exchange place, from near present end of sewer to about 200 feet northerly, in front of the new post office building.</i>

Work upon the following sewers, completing the work ordered by the city council, had not commenced September 30, 1906, namely :

No. of resolution. Date of approval.

288. Sept. 12, 1905, *West River street, from Cross to Burke, and from West River street at Elk easterly through right of way about 530 feet to end of Section 22 of the improved sewerage system.*
210. May 8, 1906, *Plainfield street, from near Lowell avenue to Laurel Hill.*
358. Aug. 8, 1906, *Mount Pleasant avenue, from Atwells to Dover street.*
359. " " " *Progress avenue, from Webster to Whitehall street.*

The amount of bills approved on account of sewers from July 1 to September 30, 1906, inclusive, was :

For construction, . . . . . \$36,551 33

Charged as follows :

Contract reservations.....	\$10,381 00
Material.....	4,603 25
Additional catch-basins.....	540 48
Testing cement.....	301 25
Sundries.....	163 72
Tools.....	75
Sewer in Dixon street, from Stamford avenue to Elmwood.....	7 50
Sewer in Dora and Wallace streets.....	415 83
Sewer in Eudora and Poe streets.....	926 80
Sewer in Exchange place, in front of new post office building.....	49 17
Sewer in Handy street, from Amhurst to Amsterdam.....	5 25
Sewer in Kelly and Longmont streets.....	903 98
Sewer in Massie avenue, Baxter street, and in right of way.....	15 00
Sewer in McKinley street, from Elmwood avenue to Alger.....	332 53
Sewer in Plenty, Linden, and Sorrento streets.....	1,002 18
Sewer in Sackett street, from Elmwood avenue to Melrose street.....	855 02
Sewer in Taber avenue, from Lloyd to President..	9 02
Sewer in Thayer street, from Barnes to Angell (storm sewer).....	3,070 28
Amount carried forward.....	\$23,583 01



Amount brought forward.....	\$30,187 77
Sewer in Dixon street, from Stamford avenue to Elmwood.....	534 58
Sewer in Dora and Wallace streets.....	1,468 14
Sewer in Eudora and Poe streets.....	926 80
Sewer in Exchange place, in front of new post office building.....	49 17
Sewer in Grotto avenue, from Penrose to Irving..	1,215 04
Sewer in Handy street, from Amherst to Amsterdam.....	764 01
Sewer in Kelly and Longmont streets.....	1,005 96
Sewer in Massie avenue, Baxter street, and in right of way.....	937 20
Sewer in McKinley street, from Elmwood avenue to Alger.....	332 53
Sewer in Narragansett avenue, and in right of way, from city line to main trunk sewer.....	7,472 35
Sewer in Northup avenue, from Silver Spring street to the westerly line of Edwards street..	97 13
Sewer in Plenty, Linden and Sorrento streets....	1,002 18
Sewer in right of way, from Valley street to the Woonasquatucket river.....	213 50
Sewer in Sackett street, from Elmwood avenue to Melrose street.....	855 02
Sewer in Taber avenue, from Lloyd to President..	613 60
Sewer in Thayer street, from Barnes to Angell, (storm sewer).....	4,836 71
Sewer in Unit street, from Chalkstone avenue to Maynard street....	7,187 00
Sewer in Veazie street and Douglas avenue.....	1,090 17
Sewer in Waverly street, from Cranston to Union avenue. ....	979 24
Sewer in Waterloo street, from near Parade to Dexter.....	306 13
Sewer in Pleasant Valley Division, Section 31 ....	98,865 84
	<u>\$169,940 06</u>
For maintenance, . . . . .	\$119,966 10
Classified as follows:	
Cleaning basins and sewers.....	\$26,448 47
Repairing basins and sewers.....	12,037 19
Tools. ....	2,819 52
Cleaning and repairing old drains .....	2,740 92
Inspection of connections.....	2,689 27
Sundries.....	1,928 77
Salary, superintendent.....	1,768 00
Barn expenses.....	1,536 90
Horses, wagons, harnesses, etc.....	1,061 02
Use of water.....	900 00
Amount carried forward . . . . .	<u>\$63,939 06</u>

### REMOVE OBSTRUCTIONS, GRADE AND PUT IN GOOD CONDITION.

**Date of order.**

May 18, 1905, *Hope street, from Rochambeau avenue to the city line.*  
 Jan. 18, 1906, *Crawford street, from South Water to South Main, and South Main street, from Crawford to Planet.*

The following work was in progress September 30, 1906 :

#### SIDEWALKS CURBED AND GUTTERS PAVED.

**Date of order.**

May 17, 1906, *Sackett street, from Elmwood avenue to Melrose street.*  
 June 21, 1906, *Eudora street, from Eddy to Poe.*  
 " " " *Poe street, from Rhodes to Public.*  
 Aug. 2, 1906, *Allens avenue, from Henderson street to Globe.*

#### LAY-OUT, EXTEND, WIDEN, AND IMPROVE.

**Date of order.**

Aug. 3, 1906, *Allens avenue and Eddy street.*

The following work, ordered by the board of aldermen and city council, had not commenced September 30, 1906, namely :

#### SIDEWALKS CURBED AND GUTTERS PAVED.

**Date of order.**

May 17, 1906, *Sorrento street, from Union avenue to Waverly street.*  
 Sept. 20, 1906, *Kelly street, from the angle in said street to Bancroft.*  
 " " " *Elton street, from Wayland avenue to Humboldt.*

### REMOVE OBSTRUCTIONS, GRADE AND PUT IN GOOD CONDITION.

Date of order.

June 21, 1906, *River avenue, from Eaton street to  
Smith.*

Bills approved on account of highways  
from July 1 to September 30, 1905, inclu-  
sive, amounted to :

Regular appropriation.....	\$96,924 65	
Special appropriation.....	11,087 41	
		\$108,012 06

Classified as follows :

Cleaning streets.....	\$23,859 78	
Repairs on unpaved streets.....	20,116 75	
Crushed stone—material and labor.....	11,463 66	
Repairs on paved streets.....	10,419 38	
Stone—paving and crosswalk.....	3,599 11	
Blacksmith and wheelwright shop.....	2,300 11	
Watering streets.....	1,783 52	
Barn expenses.....	1,706 22	
Tools, implements, etc.....	1,562 69	
Repairs on stone crushers.....	1,312 13	
Sundries.....	1,155 55	
Horses, wagons, harnesses, etc.....	819 05	
Steam rollers—repairs and supplies.....	607 64	
Labor on material.....	598 20	
Superintendent's salary.....	442 00	
Building driveways, etc.....	296 60	
Watchman at city yard.....	156 00	
Fencing streets—material and labor.....	62 55	
Car fares.....	15 00	
Office expenses, city yard.....	10 36	
Telephone lines.....	5 60	
Repairs on building, highway yard.....	1 25	
		82,265 14

### NEW WORK — BUILDING AND REBUILD- ING STREETS, ETC.

#### SIDEWALKS CURBED AND GUTTERS PAVED.

<i>Baxter street, from Massie avenue to its southerly termination...</i>	\$127 96	
<i>Dean street, from Cedar to West Exchange.....</i>	572 52	
Amounts carried forward.....	\$700 50	\$82,265 14

# REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 25

Amounts brought forward.....	\$700 50	\$82,283 24
<i>Dora street</i> , from Webster avenue to Whitehall street.....	2,556 35	
<i>Ellery street</i> , from Wendell to Union avenue.....	173 55	
<i>Eudora street</i> , from Eddy to Poe.....	587 98	
<i>Handy street</i> , from Amsterdam to Amherst.....	231 41	
<i>Longmont street</i> , from Admiral to Salina.....	996 71	
<i>Mussie avenue</i> , from Broad street to Baxter.....	1,020 66	
<i>Poe street</i> , from Rhodes to Public.....	78 75	
<i>Sackett street</i> , from Elmwood avenue to Melrose street.....	829 77	
<i>Taber avenue</i> , from President to Lloyd.....	1,379 23	
<i>Unit street</i> , from Chalkstone avenue to Maynard street.....	158 20	
<i>Wallace street</i> , from Priscilla avenue to Whitehall street.....	1,071 38	
<i>Waverly street</i> , from Union avenue to Cranston street.....	631 51	
<i>What Cheer avenue</i> , from Laurel Hill to Pocasset...	22 10	
		10,438 10

## REMOVE OBSTRUCTIONS, GRADE AND PUT IN GOOD CONDITION.

<i>Hope street</i> , from Rochambeau avenue to city line..	\$4,233 31	
<i>Crawford street</i> , from South Water to South Main, and South Main street, from Crawford to Planet	10,897 73	
		15,101 04

## LAY OUT, EXTEND, WIDEN AND IMPROVE.

<i>Allens avenue</i> and Eddy street.....	189 68
	\$108,012 06

Bills deposited with the city treasurer for collection from July 1 to September 30, 1906, inclusive, amounted to . . . \$3,675 49

## As follows:

Labor and material.....	\$2,257 54
Blacksmith and harness work for other departments.....	620 68
Boarding horses for other departments.....	254 02
Building driveways, etc.....	250 25
Street sweepings.....	198 00
Manure from barn.....	73 00
Empty barrels.....	22 00
	\$3,675 49

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of . . . . . \$3,985 36

As follows:

Labor and material.....	\$2,683 47	
Blacksmith and harness work for other departments.....	599 13	
Boarding horses for other departments.....	254 02	
Building driveways, etc.....	189 59	
Street sweepings.....	170 75	
Manure from barn.....	73 00	
Empty barrels.....	15 40	
		\$3,985 36

Bills approved on account of highways for the fiscal year ending September 30, 1906, inclusive, amounted to:

Regular appropriation.....	\$361,695 07	
Special appropriation.....	18,066 86	
		\$379,761 93

Classified as follows:

Cleaning streets.....	\$73,334 44	
Crushed stone, material and labor.....	64,427 13	
Repairs on unpaved streets.....	61,808 79	
Stone, paving and crosswalk.....	34,101 74	
Repairs on paved streets.....	20,468 76	
Blacksmith and wheelwright shop.....	10,529 89	
Barn expenses.....	9,571 80	
Tools, implements, etc.....	6,676 15	
Steam rollers, repairs and supplies.....	4,474 71	
Repairs on stone crushers.....	4,093 80	
Watering streets.....	4,027 97	
Labor on material.....	3,732 42	
Removing snow and ice.....	3,500 71	
Horses, wagons, harnesses, etc.....	2,303 60	
Sundries.....	2,116 75	
Superintendent's salary.....	1,768 00	
Building driveways, etc.....	905 00	
Fencing streets, material and labor.....	751 39	
Watchman at city yard.....	624 00	
Office expenses, city yard.....	225 36	
Car fares.....	95 00	
Repairs on buildings, highway yard.....	50 13	
Telephone lines.....	22 40	
		\$309,609 94
Amount carried forward.....		\$309,609 94

Amount brought forward..... \$309,609 94

**NEW WORK—BUILDING AND REBUILD-  
ING STREETS, ETC.**

**SIDEWALKS CURBED AND GUTTERS PAVED.**

<i>Andem street</i> , from Canton to Bergen.....	\$1,484 48	
<i>Baxter street</i> , from Massie avenue to its southerly termination.....	127 98	
<i>Dean street</i> , from Cedar to West Exchange.....	572 52	
<i>Dizon street</i> , from Elmwood avenue to Stamford...	922 63	
<i>Dora street</i> , from Webster avenue to Whitehall street.....	2,556 35	
<i>Ellery street</i> , from Wendell to Union avenue.....	1,927 10	
<i>Eudora street</i> , from Eddy to Poe.....	587 98	
<i>Everett avenue</i> , from Arlington to Elmgrove.....	100 00	
<i>Grotto avenue</i> , from Penrose to Irving.....	2,088 12	
<i>Haully street</i> , from Amsterdam to Amherst.....	959 13	
<i>Longmont street</i> , from Admiral to Salina.....	996 71	
<i>Massie avenue</i> , from Broad street to Baxter.....	1,020 66	
<i>Narragansett avenue</i> , from the city line northerly to a point about 120 feet north of Ardoene street.....	5,927 71	
<i>Poe street</i> , from Rhodes to Public.....	78 75	
<i>Ralph street</i> , from Eastwood avenue to Laban street	501 88	
<i>Sackett street</i> , from Elmwood avenue to Melrose street.....	829 77	
<i>Spencer street</i> , from Almy to Harkness.....	791 78	
<i>Summit avenue</i> , from Fourth to Seventh.....	3,407 44	
<i>Taber avenue</i> , from President to Lloyd.....	1,379 23	
<i>Unit street</i> , from Chalkstone avenue to Maynard street.....	4,516 60	
<i>Wallace street</i> , from Priscilla avenue to Whitehall street.....	1,342 96	
<i>Waverly street</i> , from Union avenue to Cranston street.....	2,527 22	
<i>What Cheer avenue</i> , from Laurel Hill to Pocasset..	3,178 21	
		37,825 21

**PAVE WITH GRANITE BLOCKS.**

*Sabin street*, from West Exchange to Aborn..... 5,007 91

**REMOVE OBSTRUCTIONS, GRADE AND PUT IN GOOD CONDITION.**

<i>Admiral street</i> , from Douglas avenue to Hillwood street.....	\$4,190 36	
<i>Hope street</i> , from Rochambeau avenue to city line..	5,061 65	
<i>Crawford street</i> , from South Water to South Main, and South Main street, from Crawford to Planet.....	17,867 18	
		27,119 19

**LAY OUT, EXTEND, WIDEN, AND IMPROVE.**

<i>Allens avenue</i> and Eddy street.....	189 68	
		\$379,751 93

### SIDEWALKS AND CURBING.

Bills approved on account of sidewalks  
and curbing from July 1, to September 30,  
1906, inclusive, amounted to, . . . \$5,768 42

Charged as follows:

Granite curbing.....	\$4,679 79
Concreting sidewalks.....	1,088 63
	<hr/>
	\$5,768 42

Bills deposited with the city treasurer for  
collection from July 1 to September 30,  
1906, inclusive, amounted to . . . \$306 06

As follows:

Granite curbing.....	\$231 12
Concreting sidewalks.....	74 94
	<hr/>
	\$306 06

During the quarter, coupons from bills  
collected have been returned by the city  
treasurer and receipted for to the amount of \$680 92

As follows:

Curbing bills.....	\$351 74
Granite curbing.....	204 24
Concreting sidewalks.....	74 94
	<hr/>
	\$630 92

Bills approved on account of sidewalks  
and curbing for the fiscal year ending Sep-  
tember 30, 1906, inclusive, amounted to . . . \$25,202 61

Charged as follows :

Granite curbing.....	\$18,969 31
Concreting sidewalks.....	4,969 49
Repairing sidewalks and gutters.....	1,283 81
	<hr/>
	\$25,202 61

CITY ENGINEER.

Bills approved on account of the city engineer's department from July 1 to September 30, 1906, inclusive, amounted to . \$10,246 29

Charged as follows :

Salary — city engineer.....	\$1,125 00
Salaries of assistants.....	7,715 84
Salaries of clerks.....	828 75
Supplies, drawing material, etc.....	324 70
Car fares.....	202 10
Telephone lines.....	25 70
Instrument and repairs.....	17 45
Sundries.....	4 06
Carriage hire.....	2 70
	<hr/>
	\$10,246 29

Bills deposited with the city treasurer for collection (for old blue printing frame), from July 1, to September 30, 1906, inclusive, amounted to . . . . \$10 00

During the quarter, coupons from bills collected (for old blue printing frame), have been returned by the city treasurer, and receipted for to the amount of . . . \$10 00

Bills approved for account of the city engineer's department, for the fiscal year ending September 30, 1906, inclusive, amounted to . . . . \$44,671 43



## Charged as follows :

Salary—city engineer.....	\$4,000 00
Salaries of assistants.....	31,914 79
Salaries of clerks.....	3,232 00
Supplies, drawing material, etc.....	958 67
Car fares.....	806 15
Instruments and repairs.....	135 88
Telephone lines.....	103 80
Sundries.....	11 30
Carriage hire.....	9 60
Meteorological instruments and repairs.....	8 25
	<hr/>
	\$44,671 43

## BRIDGES.

July 27th, the proposal of the Rhode Island Concrete Company to lay an asphalt pavement on the Charles street bridge at \$1.95 per square yard for new work and \$1.00 per square yard for top dressing, was accepted.

Bills approved on account of bridges from July 1, to September 30, 1906, inclusive, amounted to \$7,045 56

## Charged as follows :

Acorn street bridge.....	\$3 00
Atwells avenue bridge.....	9 50
Barn expenses.....	67 71
Car fares.....	25 00
Charles street railroad bridge.....	31 18
Crawford street bridge.....	3 68
Delaine street bridge.....	9 50
Eagle street bridge.....	1 20
Gaspee street bridge.....	34 50
Horses, wagons, harnesses, etc.....	50 68
Lumber, hardware, etc.....	407 70
Point street bridge.....	549 12
Promenade street bridge.....	15 00
Red bridge.....	153 01
Rent of keeper's house—Washington bridge.....	36 00
Salaries—Point street bridge.....	1,008 25
	<hr/>
Amount carried forward.....	\$2,405 63

# REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 31

Amount brought forward.....	\$2,405 63
Salaries—Red bridge.....	536 25
Salaries—Washington bridge.....	515 90
Smithfield avenue bridge.....	12 25
Smithfield avenue bridge—to rebuild.....	2,957 84
Sundries.....	127 21
Telephone lines.....	2 68
Tools.....	92 28
Wanskuck bridge.....	50 20
Washington bridge.....	160 08
Whelden street bridge.....	185 24
	<hr/>
	\$7,045 56

Bills deposited with the city treasurer for collection (for old lumber), from July 1, to September 30, 1906, inclusive, amounted to \$4 00

During the quarter, coupons from bills collected (for old lumber), have been returned by the city treasurer, and receipted for to the amount of \$4 00

Bills approved on account of bridges for the fiscal year ending September 30, 1906, inclusive, amounted to \$20,596 43

## Charged as follows:

Acorn street bridge.....	\$3 60
Atwells avenue bridge.....	9 50
Barn expenses.....	390 15
Branch avenue bridge.....	2 35
Building at city yard.....	1 32
Car fares.....	50 00
Cemetery street bridge.....	1 20
Charles street railroad bridge.....	31 18
Crawford street bridge.....	58 62
Delaine street bridge.....	9 50
Eagle street bridge.....	1 20
Gaspee street bridge.....	72 25
Geneva bridge.....	1 85
Horses, wagons, harnesses, etc.....	120 91
Lumber, hardware, etc.....	924 21
	<hr/>

Amount carried forward..... \$1,677 84

Amount brought forward.....	\$1,677 84
Manton bridge.....	3 97
Manton avenue bridge.....	79 13
Merino bridge.....	374 10
Mill street bridge.....	11 67
Nash lane bridge.....	108 10
Point street bridge.....	2,388 52
Promenade street bridge.....	32 10
Randall street bridge.....	38 06
Red bridge.....	1,175 09
Rent of keeper's house — Washington bridge.....	144 00
Salaries — Point street bridge.....	3,967 50
Salaries — Red bridge.....	2,094 25
Salaries — Washington bridge.....	2,123 71
Smith street .....	15 55
Smithfield avenue bridge.....	409 93
Smithfield avenue bridge — to rebuild.....	2,984 84
Sundries.....	643 55
Telephone lines.....	10 72
Tools.....	447 70
Valley street bridge — north span.....	10 02
Valley street bridge — south span.....	2 78
Veazie street bridge.....	6 30
Wanskuck bridge.....	65 91
Washington bridge.....	1,083 72
Washington row bridge.....	20 35
West River street bridge.....	3 63
Weybosset bridge.....	143 16
Whelden street bridge.....	520 24
	<hr/>
	\$20,596 43

Bills approved for account of rebuilding abutments, piers, and superstructure, Point street bridge, from July 1 to September 30, 1906, inclusive, have been paid from the special appropriation for that work to the amount of . . . . .

\$8,629

Bills approved for account of rebuilding abutments, piers, and superstructure, Point street bridge, for the fiscal year ending September 30, 1906, inclusive, amounted to . . .

\$48,757

Bills approved for account of building the river walls between the Burnside and Exchange bridges for the fiscal year ending September 30, 1906, inclusive, amounted to

\$1,369

## PUBLIC LIGHTS.

Bills approved on account of the public lights from July 1 to September 30, 1906, inclusive, amounted to . . . \$69,682 68

## Charged as follows:

Arc lights.....	\$50,106 41
Incandescent lights.....	13,300 04
Welsbach lights.....	6,072 17
Salaries.....	196 00
Setting and removing gas posts.....	9 06
	<u>\$69,682 68</u>

Bills deposited with the city treasurer for collection (for removing gas posts), from July 1 to September 30, 1906, inclusive, amounted to . . . \$9 06

During the quarter, coupons from bills collected (for removing gas posts), have been returned by the city treasurer and receipted for to the amount of . . . \$9 06

Bills approved on account of the public lights for the fiscal year ending September 30, 1906, inclusive, amounted to . . . \$278,680 70

## Charged as follows:

Arc lights.....	\$200,132 95
Incandescent lights.....	52,058 85
Welsbach lights.....	25,068 96
Salaries.....	1,356 67
Setting and removing gas posts.....	47 92
Car fares.....	15 00
Supplies for repairing posts and lanterns.....	35
	<u>\$278,680 70</u>

## PUBLIC WORKS OFFICE.

Bills approved on account of the public works office from July 1, to September 30, 1906, inclusive, amounted to . . . \$5,038 48

## Charged as follows:

Salaries of commissioner and secretary.....	\$1,850 00
Salaries of office assistants.....	2,961 66
Office supplies.....	206 87
Telephone lines.....	19 95
	<hr/>
	\$5,038 48

Bills approved on account of the public works office for the fiscal year ending September 30, 1906, inclusive, amounted to . \$20,933 55

## Charged as follows:

Salaries of commissioner and secretary.....	\$7,445 00
Salaries of office assistants.....	12,667 98
Office supplies.....	740 77
Telephone lines.....	79 80
	<hr/>
	\$20,933 55

## ABOLISHING GRADE CROSSING AT GROVE STREET, ETC.

Bills approved for account of abolishing grade crossing at Grove street, etc., from July 1, to September 30, 1906, inclusive, have been paid from the special appropriation for that work, to the amount of . . \$4,802 55

Charged as follows :

Building approaches to Arthur avenue bridge ....	\$4,751 38
Building retaining walls, etc., Barre street.....	51 17
	<hr/>
	\$4,802 55

Bills approved for account of abolishing  
grade crossing at Grove street, etc., for the  
fiscal year ending September 30, 1906, inclu-  
sive, amounted to . . . . . \$18,670 25

Charged as follows :

Building approaches to Arthur avenue bridge.....	\$10,985 97
Building retaining walls, etc., Barre street.....	7,684 28
	<hr/>
	\$18,670 25

WALTER F. SLADE,

*Commissioner.*



[907]

CITY DOCUMENT

[No. 4.]

NINETY-SIXTH  
QUARTERLY REPORT

OF THE

Department of Public Works

OF THE

CITY OF PROVIDENCE, R. I.

QUARTER ENDING DECEMBER 31, 1900.



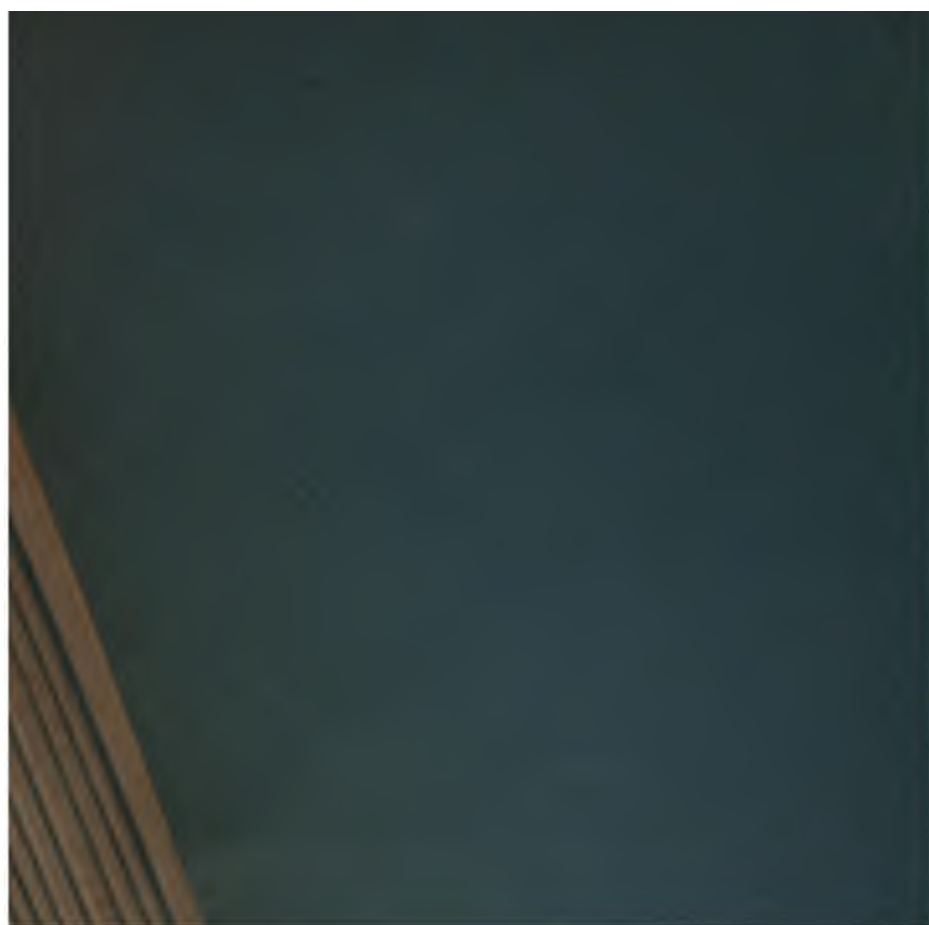
THE DISTANCE PRESS

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11 WASHINGTON STREET

1901





1907.] CITY DOCUMENT.

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NINETY-SIXTH  
QUARTERLY REPC  
OF THE

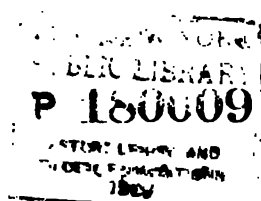
Department of Public

OF THE  
CITY OF PROVIDENCE, R

QUARTER ENDING DECEMBER



The Providence Press:  
SNOW & FARNHAM, CITY PRINTER  
63 Washington Street,  
1907.



# REPORT.

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OFFICE OF THE DEPARTMENT OF PUBLIC WORKS, }  
CITY HALL, PROVIDENCE, R. I., January 2, 1907. }

TO THE HONORABLE THE CITY COUNCIL: .

In compliance with the requirements of Chapter 41 of the ordinances, the Commissioner of Public Works respectfully presents the ninety-sixth quarterly report of the expenditures by the several departments under his direction and control, with statements of work ordered and the condition and cost of same, for the quarter ending December 31, 1906.

## WATER WORKS.

October 3d, the proposal of the town of Cranston to build a macadam roadway on the line of the new 42-inch water main through the land of the Harris Farm and Mine Company, J. A. Budlong and Son Company and Patrick Clune, from Reservoir avenue to Park avenue, for the sum of \$2,500 per mile, was accepted.

November 27th, the proposal of the Builders Iron Foundry to furnish and deliver at Pettaconset two 20-inch Venturi meters complete with indicators and fittings, for \$864, was accepted.

December 13th, the proposal of John W. Lyon to furnish taps and stops for the ensuing year, was accepted and a contract subsequently executed. Amount \$1,555.70.

December 14th, the proposal of the Charles J. Jager Company to furnish and deliver at Pettaconset one type -S" twin-cylinder 10-H. P. Jager engine for the sum of \$615, was accepted.

December 15th, the proposal of Belcher and Loomis Hardware Company to furnish and deliver 3,600 feet of double braided weatherproof cable at 26 8-10 cents per foot, was accepted.

December 18th, the proposal of Warren Foundry and Machine Company to furnish and deliver in this city 377 tons of cast iron water pipe at \$35 per net ton, was accepted and a contract subsequently executed.

December 19th, the following proposals for furnishing and delivering fire hydrants and water gates, were accepted and contracts subsequently executed, namely :

The Ludlow Valve Manufacturing Company.....	10 posthydrants with gates at \$63 00 each.
The Fairbanks Company.....	{ 3 16-inch water gates at 77 36 each.
	{ 6 12-inch water gates at 32 70 each.
Coffin Valve Company .....	{ 10 8-inch water gates at 17 75 each.
	{ 60 6-inch water gates at 11 50 each.

December 20th, the proposals of the following parties to furnish and deliver pig lead and lead pipe were accepted, viz :

Phillips Lead and Supply Company .....	5,000 lbs. Ballbach pig lead at 6½ cents per lb
Phillips Lead and Supply Company .....	2,000 lbs. ½-inch lead pipe at 7½ cents per lb
Phillips Lead and Supply Company .....	1,000 lbs. 1-inch lead pipe at 7½ cents per lb
The Congdon and Carpenter Company .....	6,500 lbs. ½-inch lead pipe at 7½ cents per lb
The L. H. Fillingham Supply Company .....	3,500 lbs. ½-inch lead pipe at 7½ cents per lb.
The L. H. Fillingham Supply Company .....	5,000 lbs. Ballbach pig lead at 6½ cents per lb
Metcalf Iron Company .....	3,000 lbs. ½-inch lead pipe at 7½ cents per lb

December 26th, the proposal of Fuller Iron Works to furnish the special castings required by the water department for 1907, was accepted and a contract executed. Amount \$3,450.06.

The average daily consumption of water during the last quarter was 14,547,776 gallons, and the average daily consumption for the year 1906 was 15,045,365 gallons.

Water pipes were laid during the quarter as follows :

42-INCH.	
In Pocasset and Webster avenues; and in Cranston and Transit streets; Narragansett, Old Park and Reservoir avenues, and in right of way to Sockanosset reservoir in town of Cranston.....	20,651.21 feet.
36-INCH.	
To connect with new main in town of Cranston.....	1.25 feet.
30-INCH.	
In Plainfield street.....	81.77 feet
24-INCH.	
In Cranston street, in town of Cranston.....	8.32 feet.
16-INCH.	
In Broadway and Knight streets and in Brayton avenue..	5,227.82 feet.
12-INCH.	
In Knight street; and in right of way, Cranston street, Park and Reservoir avenues in the town of Cranston	1,014.60 feet.
8-INCH.	
In Admiral, Byfield, Crawford, Killingly and Wallace streets and Pocasset avenue; in right of way, Cranston, Second and Transit streets; Arlington, Burnham, Dyer, Harris, Pontiac, Reservoir and Webster avenues in the town of Cranston.....	1,101.15 feet.
6-INCH.	
In Broadway; Ceres, Cedar, Clarence, Dante, Dora, Forest, Fourth, Gay, Hamilton, Ledge, Pearl, Roosevelt, Somerset and Veto streets and Rodgers court; Elingrove, Lenox, Progress, Pocasset and Sterling avenues; in right of way, Beckwith, Cedar, Cranston, Gordon, Hayes, Prospect, Potter and Second streets; Arlington, Blackamore, Burnham, Cutting, Harris, Orchard, Princess, Sumner, Terrace, Whipple and Webster avenues in the town of Cranston; and in Smith street, Fruit Hill and Olney avenues in the town of North Providence.....	5,850.54 feet,
Total.....	33,996.66 feet

or 6.427 + miles.

Water pipes have been removed during the quarter as follows :

<b>12-INCH.</b>	
From Cranston street in the town of Cranston.....	46.70 feet.
<b>8-INCH.</b>	
From Knight street, Northup and Pocasset avenue; and from Cranston and School streets in the town of Cranston.....	539.67 feet
<b>6-INCH.</b>	
From Arsenal lane; Broadway and Wallace streets and Pocasset avenue; and from Cranston street, Arlington, Burnham, Harris and Webster avenues in the town of Cranston.....	4,511.90 feet.
Total.....	5,098.27 feet.

or, .965 + miles.

Statement of sizes and lengths of pipe laid since the commencement of the work :

42-inch.....	25,630.70 feet.
36-inch.....	10,208.82 feet.
30-inch.....	61,410.07 feet.
24-inch.....	46,413.05 feet.
20-inch.....	9,626.59 feet.
16-inch.....	42,142.02 feet.
12-inch.....	113,295.94 feet.
10-inch.....	15,062.78 feet.
8-inch.....	310,620.09 feet.
6-inch.....	1,278,567.88 feet.
Total.....	1,913,016.94 feet.

or, 362.313 + miles.

Statement of sizes and lengths of pipe laid for the special water service for fire protection since the commencement of the work :

24-inch .....	4,297.46 feet.
16-inch .....	23,004.37 feet.
12-inch .....	2,215.76 feet.
Total .....	29,517.59 feet.

or 5.59 + miles.

Twelve fire hydrants were set during the quarter, one in each of the following locations:

- Broadway, south side, on west line of America street.
- Broadway, south side, 101 feet east of Harris avenue.
- Broadway, south side, 208 feet east of east line of Battey street.
- Broadway, south side, 5 feet east of east line of Ringgold street.
- Byfield street, north side, 254 feet east of gate at Broad street.
- Binghampton avenue, Johnston, north side, 221.5 east of Greenville avenue.
- Cedar street, Cranston, east side, at northeast corner of first street north of Park avenue.
- High Service avenue, North Providence, west side, 11 feet north of north line of Smith street.
- Maple street, Cranston, at northwest corner of second street north of Park avenue.
- Northup avenue, north side, on northwest line of Edwards street.
- Smith street, North Providence, northwest side, 335 feet east of Fruit Hill avenue.
- Somerset street, north side, 205 feet east of east line of Prairie avenue.

The total number of fire hydrants, exclusive of those for special service for fire protection, is now two thousand one hundred and seven — nineteen hundred and seventy-four flush, and one hundred and thirty-three post.

The total number of fire hydrants on the special water service for fire protection is ninety-two.

During the quarter two hundred and sixty-six water meters were set, of which number eighty were to replace other meters. The use of ten meters was discontinued.

The following meters were in use at the close of the quarter:



Category	Year.									Total
	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	
Building Permits	1,700	200	47	10	4		1	1	1	2,164
Building Permits - Renewal			4	6		2	1	1	1	11
Plumbing	1,440	1,250	271	171	70	22	20	1	1	3,256
Electric	1,200	100	41	12	14	1	1	1	1	1,372
Water Service Connections			1				1	1	1	3
Water					17	31	19	4		71
Gas	14									14
Water	24									24
Plumbing	1,400	400	74	36	21	7	7	1		2,346
Electric	200		1							201
Water										1
	3,344	1,250	313	200	100	70	30	4	1	5,202

Four plumber's licenses were issued during the quarter making the total number five one hundred and thirty, all of which expired December 31, 1906.

Six hundred and ninety-seven plumbing permits were issued during the quarter.

One hundred and seventy-five applications for water were made during the quarter making the total number twenty-eight thousand and thirty.

The number of new service stops opened during the quarter was one hundred and eighty-three.

The total number of service stops opened to December 31, 1906, inclusive, was twenty-seven thousand three hundred and thirty-two. The number in actual use December 31, 1906, was twenty-five thousand and ninety-four.

The following is a list of sprinkler hydrants for car sprinklers, namely :

Angell street, south side, 90 feet east of Wayland avenue, in sidewalk.  
 Bassett street, northwest side, 105½ feet southwest of Hoppin.  
 Branch avenue, south side, 316 feet west of Woodward road, in sidewalk.  
 Camp street, east side, 125 feet north of Olney, in sidewalk.  
 Chalkstone avenue, northeast corner of Fallon, in sidewalk.  
 Dexter street, west side, 18 feet south of Cranston, in sidewalk.  
 Earl street, south side, 71½ feet east of Bucklin.  
 Eddy street, west side, at Richmond, in street.  
 Eddy street, east side, 9½ feet south of south line of Calla street, in sidewalk.  
 Edna street, west side, 16 feet north of south line of car house.  
 Elmwood avenue, east side, 85 feet south of Thrackeray street.  
 Hope street, east side, 125 feet north of Barnes, in street.  
 Manton avenue, west side, 150 feet south of fire station, in sidewalk.  
 Market square, north side, 24 feet east of Canal street, in street.  
 North Main street, west side, 182 feet north of White, in street.  
 North Main street, west side, 17 feet north of Livingstone, in street.  
 Orms street, south side, 23 feet east of Windsor, in sidewalk.  
 Randall square, east side, 32 feet north of Randall street, in street.  
 Richmond street, southwest side, 44 feet southeast of Pine, in sidewalk.  
 Silver Spring street, north side, 61 feet east of Charles.  
 Smith street, southwest side, 360 feet southeast of Hilltop avenue, in sidewalk.  
 Thurbers avenue, south side, 208 feet east of Broad street, in sidewalk.  
 Wickenden street, south side, 167 feet west of Brook, in street.  
 Winter street, east side, 187 feet south of Pond, in sidewalk.

The following is a list of street sprinklers ready for use on the Providence water works, viz. :

Aborn street, near junction of Atwells avenue.  
 America street, near Atwells avenue.  
 Barton street, corner of Broadway.  
 Bradford street, near Broadway.  
 Branch avenue, near junction of North Main street.  
 Benefit street, foot of Angell.  
 Benefit street, between North Main and Halsey.  
 Beacon avenue, near Friendship street.  
 Broad street, near Gallup.  
 Broadway, north side, west of Harris avenue.  
 Camp street, between Cypress and Larch.  
 Codding street, near Westminster.  
 Cranston street, east side of railroad bridge.  
 Crary street, between Eddy and Hospital.  
 Cromwell street, near Dexter.  
 Daniel avenue, near Plainfield street.  
 Dexter street, opposite Division.

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Doyle avenue, near Hope street.  
Doyle avenue, near North Main street.  
Exchange place, west end.  
Ford street, west of Cranston.  
Garnet street, near Pine.  
Governor street, near Waterman.  
Greenwich street, corner Elmwood avenue.  
Harris avenue, near Atwells.  
Hope street, junction of Thayer.  
Hope street, corner of Wickenden.  
John street, corner of Benefit.  
Knight street, corner of Grove.  
Laurel Hill avenue, near Plainfield street.  
Linden street, near Broad.  
Manning street, near Brook.  
Medway street, east of Wayland avenue.  
Melrose street, near south corner of burying ground.  
Moore street, corner of Broad.  
Morris avenue, north of Olney street.  
North Main street, corner of Thomas.  
North Main street, near Mill.  
Olive street, east of Prospect.  
Olney street, near Camp.  
Orms street, near Ormsbee avenue.  
Oxford street, corner of Eddy.  
Pocasset avenue, near Plainfield street.  
Power street, west of Hope.  
Promenade street, west of Gaspee.  
Promenade street, west of Holden.  
Promenade street, west of Steeple.  
Prospect street, corner of Bowen.  
Public street, about 200 feet east of Temple.  
Reservoir avenue, opposite Atlantic.  
Roger Williams park, near Broad street (private).  
Salem street, between Potters avenue and Benedict street.  
Smith street, near Oakland avenue.  
Smith street, near Schaffer.  
Smithfield avenue, north of Branch.  
Smithfield avenue, north of the Moshassuck river.  
Transit street, between South Water and South Main.  
Traverse street, corner of Pike.  
Washington street, corner of Dean.  
Webster avenue, north of Progress.  
West Friendship street, near Broad.  
Weybosset street, opposite Abbott park place.  
Willard avenue, west of Prairie.  
Willow street, west of Messer.  
Winter street, near Pond.  
Woodlaud street, near Holden.

The following is a list of drinking troughs supplied with water by the Providence water works, viz.:

Academy avenue, north of Chalkstone.  
 Angell street, junction of South Angell.  
 Atwells avenue, junction of Harris.  
 Bassett street, off Hospital.  
 Branch avenue and Abbott street.  
 Broad street junction of Eddy.  
 Broadway, junction of Westminster street.  
 Canal street, near Linard.  
 Charles street, corner of Ormsbee avenue.  
 Charles street and Branch avenue.  
 Chalkstone avenue, junction of Manton.  
 Dexter street, near Durfee.  
 Dorrance street, near Exchange place.  
 Douglas avenue and Chalkstone.  
 Douglas avenue and Admiral street.  
 Dyer street, near Crawford street bridge.  
 Dyer street, junction of Eddy.  
 Elmwood avenue and Public street.  
 Federal street, junction of Kenyon.  
 Fountain street, junction of Carpenter.  
 Hartford avenue, junction of Killingly street.  
 Manton avenue, junction of Atwells.  
 Miller avenue (Roger Williams park).  
 North Main street, junction of Benefit.  
 Olneyville square.  
 Plainfield street, junction of Pocasset avenue.  
 Prairie avenue, junction of Broad street.  
 Point street, junction of Friendship.  
 Point street, near the bridge.  
 Potters avenue, corner of Cranston street.  
 Randall square.  
 Reservoir avenue, junction of Pontiac street.  
 Rochambeau avenue, east of Blackstone boulevard.  
 Smith street, junction of Chalkstone avenue.  
 South Main street, junction of Wickenden.  
 Thayer street junction of Hope.  
 Trinity square.  
 Waterman street, corner of East River.  
 Westminster street, junction of Cranston.  
 Weybosset street, near Mathewson.  
 Wickenden street, corner of Governor.

TOWN OF CRANSTON.

Cranston street, junction of Phenix road.  
 Park avenue, corner of Doric.

TOWN OF JOHNSTON.

Manton avenue, near Killey.

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The following is a list of drinking fountains, namely:

Atwells avenue, corner of Academy.  
Branch avenue, at Charles street.  
Benefit street, corner of College.  
Canal street corner of Steeple.  
Candace street, corner of Orms.  
Granston street, junction of Westminster.  
Davis park.  
Dexter street, opposite Division.  
Dorrance street, near Exchange place.  
Dyer street, corner of Crawford.  
Friendship street, at Hayward park.  
Jackson street, corner of Westminster.  
North Main street, near Mill  
Olneyville square.  
Prairie avenue, opposite Comstock.  
Point street, corner of Eddy.  
Potters avenue, corner of Elmwood.  
Randall square.  
Roger Williams park, near Betsey Williams cottage.  
Roger Williams park, near Elmwood avenue.  
Roger Williams park, near the menagerie.  
Ship street, corner of Dyer.  
Tockwotton park.  
Westminster street, corner of Dyer.  
Wickenden street, corner of Transit.

The following table shows the lengths, sizes, etc., of services laid during the year ending December 31, 1906:

MONTHS.	LENGTH OF SERVICES IN FEET.										NUMBER AND SIZE OF TAPS USED.				NUMBER AND SIZE OF STOPS USED.				Service Boxes Used.	
	SIZES OF PIPE.					Totals.	Total Length of Trenching.	Total Length of Paving.												
	½ inch.	¾ inch.	1 inch.	1 ¼ inch.	1 ½ inch.				½ in.	¾ in.	1 in.	1 ¼ in.	1 ½ in.	To- tal.	½ in.	¾ in.	1 in.	1 ½ in.		To- tal.
January.....	256.4	8.2	39.2	.....	.....	303.8	319.	57.	16	2	1	.....	.....	19	17	1	1	.....	19	20
February.....	143.8	.....	.....	.....	.....	143.8	151.	9.	9	.....	.....	.....	.....	9	9	.....	.....	.....	9	9
March.....	655.	20.2	.....	.....	.....	675.2	712.	82.	42	1	.....	.....	.....	43	45	1	.....	.....	46	46
April.....	899.4	70.	28.4	26.2	.....	1,024.	1,081.	132.	58	6	2	1	.....	67	61	5	2	1	69	72
May.....	1,186.2	106.8	.....	26.2	.....	1,319.2	1,376.	84.5	61	5	2	2	.....	70	66	4	.....	1	71	75
June.....	916.	71.	.....	2.9	.....	989.9	1,046.	109.	57	6	.....	2	.....	65	63	5	.....	1	69	71
July.....	799.4	81.	19.0	8.2	.....	867.6	912.	80.	46	5	1	1	.....	53	48	5	1	1	55	55
August.....	991.1	71.8	33.2	34.4	.....	1,130.5	1,186.5	114.	56	5	4	2	.....	67	59	4	2	2	67	70
September.....	885.6	43.4	.....	26.2	.....	955.2	1,003.	84.	47	4	1	1	.....	53	55	3	.....	1	59	61
October.....	1,186.7	42.6	26.6	26.2	.....	1,282.1	1,341.5	158.	61	3	3	2	.....	69	68	3	3	1	75	79
November.....	1,100.	110.	18.2	.....	.....	1,228.2	1,288.	162.	64	4	1	...	.....	68	67	5	1	.....	73	73
December.....	319.1	61.	.....	.....	.....	380.1	403.5	47.	21	5	.....	.....	.....	26	24	5	.....	.....	29	29
Totals.....	9,298.7	686.	164.6	150.3	.....	10,269.6	10,819.5	1,118.5	538	46	15	11	.....	610	582	41	10	8	641	657

following table shows the lengths, sizes etc., of services laid during thirty years ending December 31, 1906:

YEAR.	LENGTH OF SERVICES IN FEET.					TAPS USED.					STOPS USED.					Service Boxes Used.		
	SIZES OF PIPE.					Trenching.	Paving.	Totals.					Totals.					
	1/2 in.	3/4 in.	1 in.	1 1/4 in.	1 1/2 in.			1 in.	1 in.	1 in.	1 in.	1 in.	1 in.	1 in.	1 in.			
To Dec. 31, 1905.....	9,019.9	226,421.24	23,537.60	5,162.6	3,977.8	314,988.79	39,412.78	612,15,432	1,788	451	366	18,649	645	16,417	1,487	319	19,178	19,713
1906.....		9,298.70	696	164.6	150.3	10,819.50	1,118.50	10,260.00	538	46	15	11	610	582	41	10	641	657
Totals..	9,019.9	226,720.24	24,223.60	5,227.2	4,128.1	325,808.29	39,531.28	612,15,970	1,834	466	377	19,259	645	16,999	1,528	329	19,819	20,370

Changes in size and location of services in 1906 :

TAPS AND STOPS.										SIZES AND LENGTHS OF LEAD PIPE.														Trenching.	Paving.	Change in size only.	Change in location only.	Change in both size and location.	Relaid.
TAKEN OUT.					INSERTED.					TAKEN OUT.					INSERTED.														
$\frac{3}{4}$ inch.	$\frac{1}{2}$ inch.	$\frac{3}{8}$ inch.	$\frac{1}{4}$ inch.	1 inch.	$\frac{1}{8}$ inch.	$\frac{5}{16}$ inch.	$\frac{3}{8}$ inch.	$\frac{1}{2}$ inch.	1 inch.	$\frac{1}{4}$ inch.	$\frac{3}{8}$ inch.	$\frac{1}{2}$ inch.	1 inch.	1 $\frac{1}{4}$ inch.	1 $\frac{1}{2}$ inch.	2 inch.	2 $\frac{1}{2}$ inch.	3 inch.	4 inch.	5 inch.	6 inch.	8 inch.	10 inch.						
32	47	10	6	6	.....	27	12	12	11	533.5	744.9	222.8	104.2	71.2	.....	532.2	259.4	169.4	137.6	.....	1,040.5	45	8	8	6	6			

39 services have been removed.  
During the year 145 taps were reported obstructed, and were dug up and examined; 140 were cleaned, and 5 were found unobstructive.  
18 private taps were inserted.



The following table exhibits the number of service stops opened each month from the commencement to December 31, 1905:

Year.	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906
Y	64	33	21	34	65	15	49	9	20	7	17	15	21	17	18	20	7	39	36	39	56	40	29	30	27	30	40	18	24	18	27	26	19	24	26	
F	47	18	18	7	25	23	18	9	10	3	11	9	10	7	15	7	10	21	25	26	23	24	28	8	28	24	21	7	15	10	18	26	12	11	26	
M	38	34	63	7	45	32	60	19	46	23	39	11	28	9	24	16	14	19	28	24	28	36	40	27	34	42	46	28	30	24	39	35	12	20	40	
A	106	109	108	32	108	82	78	52	58	55	49	55	62	48	68	60	38	61	53	73	76	71	76	67	34	70	53	69	47	73	73	60	58	60	57	
M	224	290	147	162	168	136	195	80	94	66	72	78	62	62	61	70	52	74	66	114	83	91	81	79	82	51	73	60	67	52	70	76	80	71		
J	830	255	121	172	148	114	103	71	109	82	48	64	81	81	59	50	80	59	80	83	103	106	105	100	76	86	61	73	60	96	71	58	67	75	68	
J	303	261	127	141	158	83	80	49	75	56	77	66	76	77	63	62	89	74	67	85	105	93	80	89	83	59	51	66	44	81	74	59	80	73	45	
A	294	306	123	83	94	91	51	51	39	58	87	69	61	57	71	49	52	56	76	95	104	115	116	83	64	69	54	80	66	78	62	57	52	75	65	
S	184	147	130	101	94	80	63	44	37	60	67	63	56	70	59	74	63	64	77	93	114	88	112	70	71	67	53	53	76	72	56	72	61	56	71	
O	136	125	160	97	84	81	78	79	48	61	56	47	65	62	62	80	70	64	54	104	102	96	85	90	70	62	47	54	65	66	43	58	66	64	77	
N	106	104	165	86	64	75	57	63	54	37	64	49	51	39	57	69	47	58	72	81	118	80	70	68	52	54	42	45	54	62	55	48	58	60	66	
D	56	45	122	69	25	55	45	47	39	40	27	56	44	46	38	49	42	53	50	83	102	62	62	57	58	53	47	40	56	44	40	43	51	48	40	
T	1803	1866	1864	877	1008	805	777	673	618	846	614	612	611	573	306	612	570	642	684	900	1014	902	884	768	747	688	566	606	597	692	616	612	612	646	602	

The receipts for water each year since the commencement have been as follows :

Year.	Amount.	Year.	Amount.
1872.....	\$41,003 51	1890.....	\$401,140 86
1873.....	97,386 09	1891.....	404,553 84
1874.....	132,052 39	1892.....	409,421 21
1875.....	165,144 71	1893.....	427,546 51
1876.....	183,868 73	1894.....	432,383 97
1877.....	200,039 39	1895.....	471,069 97
1878.....	218,883 33	1896.....	485,187 33
1879.....	229,551 78	1897.....	490,652 47
1880.....	247,705 06	1898.....	502,903 10
1881.....	260,530 87	1899.....	522,124 46
1882.....	269,318 77	1900.....	554,949 62
1883.....	283,632 80	1901.....	578,869 07
1884.....	302,378 36	1902.....	605,307 35
1885.....	313,561 21	1903.....	621,016 74
1886.....	323,084 67	1904.....	670,700 90
1887.....	339,513 00	1905.....	673,292 97
1888.....	346,731 58	1906.....	691,459 12
1889.....	377,497 97		

The amount of bills approved on account of water works from October 1, to December 31, 1906, inclusive, was :

For maintenance, . . . . . \$222,815 56

Classified as follows :

PETTACONSET PUMPING STATION.

Coal and wood.....	\$5,426 86
Sundries.....	970 87
Firemen.....	924 00
Engineers.....	590 30
Superintendence.....	442 00
Repairs on boilers.....	163 40
Oil, waste and packing.....	152 73

Amount carried forward..... \$8,669 16

Amount brought forward.....	\$8,000 16	
Care of grounds.....	130 30	
Allis-Chalmers high-duty engine.....	90 00	
Barn expenses.....	67 80	
Labor on fuel.....	56 80	
Corliss pumping engine and house.....	33 00	
Lights.....	26 53	
Worthington high-duty engine.....	26 60	
Cornish engine house.....	11 75	
Horses, wagons, harnesses, etc.....	10 06	
		\$9,119 63
<b>SAND FILTRATION PLANT.</b>		
Installation.....	\$39,104 54	
Cleaning beds.....	3,807 14	
Labor and supplies, pumping.....	1,783 33	
Miscellaneous supplies.....	1,467 06	
Laboratory—labor and supplies.....	548 93	
		46,711 02
<b>SOCKANOSSET RESERVOIR.</b>		
Sundries.....	\$239 88	
Watchman.....	182 00	
		421 88
<b>HOPE PUMPING STATION.</b>		
Coal and wood.....	\$1,165 33	
Firemen.....	442 20	
Engineers.....	340 14	
Sundries.....	71 76	
Lights.....	59 85	
Repairs on boilers.....	6 80	
Oil, waste and packing.....	3 62	
		2,069 70
<b>HOPE RESERVOIR.</b>		
Sundries.....	\$1,098 60	
Watchman.....	204 75	
		1,303 35
<b>FRUIT HILL RESERVOIR.</b>		
Sundries.....	\$413 73	
Watchman.....	182 00	
		595 73
<b>METER DEPARTMENT.</b>		
Water meters.....	\$6,612 35	
Setting and repairing meters.....	2,074 31	
		8,686 66
Amount carried forward.....		\$88,927 97

# REPORT OF THE DEPARTMENT OF PUBLIC WORKS. 19

Amount brought forward.....		\$68,927 97
<b>PIPE LINE AND SERVICE STOPS.</b>		
Repairs.....	\$4,185 14	
Salaries of assistant engineers.....	1,788 75	
Inspection of pipe line and services.....	1,297 34	
Superintendence—salaries.....	874 25	
		8,145 48
<b>PIPE YARD.</b>		
Cast iron water pipe.....	\$86,691 92	
Laying water pipe.....	19,101 22	
Leading main from Sockanosset to city—to lay....	16,950 22	
Service pipe.....	1,898 83	
Laying service pipe.....	1,619 68	
Special castings.....	1,503 36	
Stop valves.....	1,433 40	
Tools.....	766 03	
Pig lead and tin.....	707 27	
Labor on and carting pipe.....	531 40	
Taps and stops.....	154 12	
Pipe yard, office expenses.....	89 74	
Special water service for fire protection.....	58 87	
		131,506 06
<b>MISCELLANEOUS.</b>		
Town of Cranston, tax.....	\$9,616 62	
Clerks' and inspectors' salaries.....	1,752 40	
Barn expenses.....	804 94	
Prevention of defilement of the Pawtuxet.....	517 73	
Inspection of water pipes with reference to elec- trolysis.....	416 43	
Town of North Providence, tax.....	400 00	
Car fares.....	225 00	
Horses, wagons, harnesses, etc.....	196 40	
Public drinking fountains and troughs.....	153 13	
Telephone lines.....	122 68	
Sundries.....	30 72	
		14,236 05
		\$222,815 56

The total expenditures to December 31,  
1906, inclusive, was . . . . . \$10,933,824 42

The *net* expenditure for maintenance from Octo-  
ber 1, to December 31, 1906, inclusive, was..... \$215,033 03

The *net* expenditure for maintenance to Decem-  
ber 31, 1906, inclusive, was..... \$3,172,588 94

The value of the water works system January 1, 1906, as estimated by the city engineer, was as follows:

Pettaconset pumping station .....	\$340,604 00	
Hope pumping station.....	120,778 78	
Sockanosset, Hope and Fruit Hill Reservoirs.....	691,406 08	
Main lines and distribution pipes.....	2,708,494 94	
Real estate in Pawtuxet and Lincoln.....	15,975 00	
Tools and supplies.....	39,161 63	
		<hr/> \$3,976,003 08

Bills deposited with the city treasurer for collection from October 1 to December 31, 1906, inclusive, amounted to . . . \$95,619 24

As follows:

Water.....	\$87,141 80	
Water meters.....	4,099 50	
Labor and material, laying services, etc.....	2,325 10	
Setting and repairing meters.....	1,828 09	
Rent of real estate.....	104 92	
Penalties.....	50 00	
Sale of old metal.....	38 43	
Permanently closing service stops.....	25 00	
Empty oil barrels.....	6 40	
		<hr/> \$95,619 24

During the quarter coupons from bills collected have been returned by the city treasurer and receipted for to the amount of . \$62,329 91

As follows:

Water.....	\$54,497 38	
Water meters.....	3,831 00	
Labor and material, laying services, etc.....	2,388 62	
Setting and repairing meters.....	1,391 56	
Rent of real estate.....	94 52	
Penalties.....	50 00	
Sale of old metal.....	38 43	
Permanently closing service stops.....	25 00	
Repairs on pipe line.....	7 00	
Empty oil barrels.....	6 40	
		<hr/> \$62,329 91

## SEWERS.

Four drain layer's licenses were issued during the quarter, making the total number in force one hundred and forty-three, all of which expired December 31, 1906.

During the quarter, two hundred and thirty-four permits were issued to drain layers — one hundred and one for new work and one hundred and thirty-three for extensions and repairs of drains.

November 8th, the proposals of Starkweather and Williams Company, and Charles S. Bush Company, to furnish and deliver at Harbor Junction wharf the prime green copperas in bulk required during 1907, at 60 cents per one hundred pounds, were each accepted for one-half the quantity required, respectively.

November 16th, assessments for the cost of constructing sewers were certified to the city treasurer as follows:

Ravine street and Randolph street to Smith, thence through McCaughin street to Chalkstone avenue (Section 19, I. S. S.)	\$42 18
Hamilton, Irving and Melrose streets.....	8 00
	<hr/>
	\$50 18

December 1st, ordered of James C. Goff Company one cargo of Sanford bricks at \$9.50 per M., delivered on the city wharf.

Dec. 21st, the proposal of the Warner-Miller Company to furnish and deliver at the city yard 50 catch-basin flagstones at \$5.60 each, was accepted.

The proposal of the Smithfield Granite Company, to furnish and deliver at the city yard 75 catch-basin inlet stones at \$4.75 each, was accepted.

December 26th, the proposal of Fuller Iron Works to furnish and deliver at the city yard the sewer castings required by the department for 1907, was accepted and a contract subsequently executed. Amount \$1,641.03.

December 28th, the proposal of Charles M. Kelly to furnish the cement required during 1907 was accepted and a contract subsequently executed as follows :

"Atlas" — Portland at \$1.90 per barrel delivered on the work.

"Brooklyn Bridge" — natural at \$1.15 per barrel delivered on the work.

#### SEWERS CONSTRUCTED TO DECEMBER 31, 1906, IN MILES.

ITEMS.	KIND.	Built previous to 1906.	Built during 1906.	Total to Dec. 31, 1906.
Under regular appropriation. ....	Brick.	40,449	.512	40.961
Under regular appropriation. ....	Pipe.	134,790	1.751	136.541
Under improved sewerage appropriation.	Brick and pipe.	28,388	.....	28,388
Total miles of sewers....		203,627	2.263	205.890

During the year, 70 catch-basins, 66 extra inlets and 116 manholes have been built, making a total in use December 31, 1906 of 4,861 catch-basins, 1,724 extra inlets and 8,891 manholes.

During the quarter the construction of the following sewers was completed, namely :

No. of resolution.	Date of approval.	Date of completion.
357.	Aug. 3, 1906, <i>McKinley street from Elmwood avenue to Alger.</i>	Oct. 24, 1906.
360.	" " " <i>Waterloo street, from near Parade to Dexter.</i>	Oct. 6, 1906.
373.	Sept. 11, 1906, <i>Exchange place, from near present end of sewer to about 200 feet northerly, in front of the new post office building.</i>	Nov. 3, 1906.

Work upon the following sewers was in progress at the close of the quarter, namely :

No. of resolution.	Date of approval.
68.	Feb. 7, 1905, <i>Pleasant Valley Division, Section 31.</i>
288.	Sept. 12, 1905, <i>West River street, from Cross to Burke, and from West River street at Elk easterly through right of way about 530 feet to end of Section 22 of the improved sewerage system.</i>
209.	May 8, 1906, <i>Veazie street, from its summit northwesterly to the sewer in Douglas avenue near Stansbury street, and from its summit southeasterly in Veazie street and Douglas avenue to present end of sewer about 270 feet west of Hawkins street.</i>
358.	Aug. 3, 1906, <i>Mount Pleasant avenue, from Atwells to Dover street.</i>

Work upon the following sewers, completing the work ordered by the city council, had not commenced December 31, 1906, namely :

No. of resolution.	Date of approval.
210.	May 8, 1906, <i>Plainfield street, from near Lowell avenue to Laurel Hill.</i>
359.	Aug. 3, 1906, <i>Progress avenue, from Webster to Whitehall street.</i>



## SEWER MAINTENANCE DEPARTMENT.

The following table shows the work performed by the department cleaning sewers, basins and drains for the year 1906:

MONTHS.	OLD WORK.						NEW WORK.								Total amount deposit removed, cubic yards.			
	OLD DRAINS.			SAND-CATCHERS.		OPEN DITCHES.			SUMPS.		SEWERS.					CATCH-BASINS.		
	Number.	Length in feet.	Deposit removed, cu. yards.	Number.	Deposit removed, cu. yard.	Number.	Length in feet.	Deposit removed, cu. yards.	Number.	Deposit removed, cu. yards.	Number.	Length in feet.	Deposit removed, cu. yards.	No. times examined.		Number cleaned.	Deposit removed, cu. yards.	
January.....	.....	.....	.....	.....	.....	.....	.....	.....	8	297.59	79	16,100	69.59	.....	1	1,093	980.19	1,847.37
February.....	.....	.....	.....	.....	.....	.....	.....	.....	26	405.41	60	14,628	103.18	.....	1	950	983.70	1,492.29
March.....	.....	.....	.....	.....	.....	.....	.....	.....	23	369.67	58	18,700	69.95	.....	1	346	495.45	941.55
April.....	1	175	13.88	.....	.....	.....	.....	.....	7	175.92	9	2,000	14.21	.....	2	963	1,552.54	1,756.55
May.....	2	475	27.78	.....	.....	.....	.....	.....	14	232.67	24	27,375	100.37	42	1	1,297	1,610.80	1,971.67
June.....	.....	.....	.....	.....	.....	.....	.....	.....	21	288.82	64	10,975	27.27	.....	2	906	1,623.46	1,899.55
July.....	.....	.....	.....	.....	.....	.....	.....	.....	22	274.77	106	18,000	48.58	63	2	1,102	2,085.06	2,408.41
August.....	.....	.....	.....	.....	.....	.....	.....	.....	18	274.89	49	9,200	38.59	.....	1	1,117	1,876.74	2,309.39
September.....	1	600	13.89	.....	.....	.....	.....	.....	9	205.33	9	2,200	15.41	.....	2	1,197	1,821.92	2,053.15
October.....	.....	.....	.....	.....	.....	.....	.....	.....	16	237.37	14	3,475	22.82	.....	2	1,185	1,667.70	1,927.89
November.....	.....	.....	.....	.....	.....	.....	.....	.....	18	263.14	189	34,000	60.78	.....	1	901	1,425.14	1,887.74
December.....	.....	.....	.....	.....	.....	.....	.....	.....	21	329.15	51	9,300	65.30	.....	1	300	755.19	755.19
Totals.....	4	1,250	55.55	6	14.08	3	825	40.56	146	3,351.33	928	175,953	639.05	108	17	11,355	10,581.69	20,090.69

In addition to the accompanying form, the following work has been performed by the sewer maintenance department for the year 1906 :

#### WORK ON SEWERS.

Examined all sewers for condition and deposit, and all slots, gates, and sumps forty-eight times. Replaced 103 manhole frames, 113 manhole covers, and five track grates; also reset 242 manhole frames. Repaired ten sewers, six gates in sewers, five house connections, thirty-seven holes over sewers, and thirty-seven manholes. Cut in eight eight-inch and fifteen six-inch connections; brought thirteen manholes to grade; removed roots from 126 sewers; altered house connection on Allens avenue and Henderson street; carted loam and sand to cover deposit, and cleaned three pump wells at brick station on Ernest street; removed dead horse from precipitation tanks; cleaned and repaired yard on account of washout; put bulkheads in two sewers; flushed two connections from curb to sewer, and removed deposit from two sewer outlets.

#### WORK ON BASINS.

Examined all basins for concrete and repairs. Flushed 2,756 chutes and 4,155 traps in basins, and removed snow from 2,149 inlets. Repaired sixty-five holes at basins, fifty-six basins, twelve chutes, six storm traps, and 121 basins with gravel. Altered ten basins, altered and repaired eight basin connections, also altered and extended storm drain on Branch avenue. Reset sixty-one traps; replaced twelve basin covers; removed roots from two basin connections; built five basins and two chutes; reconnected one basin; abandoned one basin, and put fifteen extra traps in basins.

#### OLD WORK.

Examined all old drains and ditches for condition and deposit. Extended ten old drains 415 feet. Repaired four old chutes, and ten old drains. Built four chutes; altered one old drain, and leveled twenty-three dumps.

#### MISCELLANEOUS WORK.

Cleaned ninety-eight connections, charged \$249.85; cut in three connections for David Crankshaw, \$12.50; cleaned sewer on Narragansett avenue for Timothy F. Lyons, \$11, and F. E. Shaw, \$24; extended sewer on Point street for Tank and McKinnon Construction Company, \$14.25; puddled ditches for Providence Gas Company, \$303.40; pumped out four cellars, \$36.45; built basins, manholes, and supplied water for Rhode Island Company, \$991.14; altered basins, etc., for Brown and Sharpe Manufacturing Company, \$15.75; repaired sidewalk for Elisha Dyer, \$36; built basins and altered manholes, etc., for N. Y. N. H. and H. R. R. Company, \$844.32; flushed sewer for George W. Upper, \$7.25; pumped out mine for Rhode Island Graphite Company, \$39.75; built manholes and repaired sewer for Bruno, Salomoni and Petitti, \$188.14; built and altered basins, etc., on Charles street for United States Finishing Company, \$206.78; put in house connection on Smith street for John C. Dunn, \$37.50; built basins and altered manholes on Brayton avenue for General Fire Extinguisher Company, \$55; set bound stones for the contagious hospital, \$12; built

basin for Riverside Mills, \$34.60; altered chute on Middle street for Philip Case, \$9.75; put in house connection on South Main street for T. E. Manney, \$54.50; repaired basin on Adelaide avenue for Providence Telephone Company, \$2.75; built basin on Earl street for Gorham Manufacturing Company, \$46.75; thawing ground for E. W. Everson, \$26.50, and for W. N. Chadsey, \$12.50; furnished man at hydrant for Providence Veteran Firemen's Association, \$3.42; pumped out well at 34 Pratt street, \$8.75.

Water Maintenance Department: Repaired buildings at Pettacasset pumping station and Sockanosset reservoir, also sewer in Allens avenue. Built manholes on Broadway, Crânston street, and Park avenue. Connected drinking fountain on Charles street and sprinkler hydrant on Eddy street. Pounded and seeded banks at Hope and Sockanosset reservoirs. Made repairs at Hope pumping station. Cleaned, repaired, and carted clay to Hope reservoir. Cleaned filtration tanks and removed ice from same. Made repairs on line of new forty-two-inch leading main on Park avenue. Altered basin connections and drain on Harris avenue and Pocasset avenue and cleaned gates, etc., at Sockanosset reservoir for new forty-two-inch leading main.

Sewer Construction Department: Built 233.52 feet of twelve-inch sewer, sixty-six chutes, thirty-three basins, and five manholes. Abandoned one manhole and one inlet; removed nine inspectors' houses, and altered basin on Rugby and Broad streets.

Highway Department: Altered manholes and basins, and extended connections to curb on South Main street. Built chimney at crusher.

Abolishing Grade Crossings: Built basin and drain on Ridge street.

The amount of bills, approved on account of sewers from October 1, to December 31, 1906, inclusive, was:

For construction, . . . . . \$12,202 78

Charged as follows:

Material.....	\$2,142 04
Additional catch-basins.....	523 26
Sundries.....	348 27
Contract reservations.....	319 00
Testing cement.....	288 75
Sewer in Exchange place, in front of new post office building.....	1,320 34
Sewer in McKinley street, from Elmwood avenue to Alger.....	679 31
Sewer in Mount Pleasant avenue from Atwells to Dover street.....	806 86
Sewer in Plenty, Linden and Sorrento streets.....	223 18
Sewer in Venzie street and Douglas avenue.....	1,540 98
Sewer in Waterloo street, from near Parade to Dexter.....	55 95
Sewer in West River street and in right of way....	1,217 18
Sewer in Pleasant Valley Division, Section 31....	2,737 66
	<u>\$12,202 78</u>

For maintenance: . . . . . \$33,297 32

Classified as follows:

Cleaning basins and sewers.....	\$6,128 48
Repairing basins and sewers.....	4,096 71
Sundries.....	1,098 37
Use of water.....	900 00
Tools.....	880 96
Cleaning and repairing old drains.....	728 68
Inspection of connections.....	667 08
Barn expenses.....	496 16
Salary, superintendent.....	442 00
Horses, wagons, harnesses, etc.....	323 29
Office expenses.....	115 12
Telephone lines.....	43 18
Car fares.....	30 00
Cleaning private connections.....	20 20
Filling cisterns, etc.....	6 00

ERNEST STREET STATION.

Coal and wood.....	1,516 01
Engineers.....	875 98
Cleaning screens.....	642 65
Firemen.....	431 67
Cleaning and repairing pumps.....	373 60
Repairs on engines.....	127 12
Supplies.....	77 76
Care of buildings.....	61 72
Care of grounds.....	55 43
Repairs on buildings.....	43 97
Lights.....	36 40
	<hr/>
	\$20,218 54

SEWAGE PRECIPITATION TANKS.

Chemicals.....	\$5,047 80
Miscellaneous supplies.....	2,686 84
Labor in sludge disposal.....	2,294 49
Labor on sewage precipitation.....	1,383 53
Repairs on buildings.....	723 89
Electrical power.....	630 00
Fuel.....	239 94
Lights.....	42 70
Repairs on machinery.....	29 59
	<hr/>
	\$33,297 32

The *net* expenditure for construction of sewers to December 31, 1906, inclusive, was..... \$7,901,783 49

The *net* expenditure for maintenance of sewers to December 31, 1906, inclusive, was..... \$1,391,608 65

Bills deposited with the city treasurer  
for collection from October 1 to December  
31, 1906, inclusive, amounted to . . . . \$2,592 50

As follows :

Miscellaneous work.....	\$1,124 34
Pumping out cellars.....	45 20
Cleaning private connections.....	37 00
Two granite basin sets.....	30 00
Sewer material.....	1,325 30
Laying drains to curbstone.....	26 16
Testing cement.....	4 50
	<hr/>
	\$2,592 50

During the quarter, coupons from bills  
collected have been returned by the city  
treasurer and receipted for to the amount  
of . . . . . \$2,868 08

As follows :

Miscellaneous work.....	\$1,458 07
Cleaning private connections.....	47 25
Two granite basin sets.....	30 00
Pumping out cellars.....	15 20
Sewer material.....	1,286 90
Laying drains to curbstones.....	26 16
Testing cement.....	4 50
	<hr/>
	\$2,868 08

## HIGHWAYS.

Two permits to open streets were issued during the quarter.

October 3d, the proposal of the Buffalo Steam Roller Company to furnish and deliver in the city yard one 15-ton double-cylinder Buffalo-Pitts road roller for the sum of \$3,500, was accepted.

The proposal of the Narragansett Improvement Company, to lay Bermudez asphalt pavement on Broadway from Barton street to the easterly line of Jackson street was accepted and a contract subsequently executed at the following prices, namely:

For asphalt with binder, a layer of 1 1-2 inches each, \$1.30 per square yard.

For asphalt with paint coat and wearing layer of 2 inches, \$1.14 per square yard.

For asphalt, one layer of 2 inches without paint coat, \$1.00 per square yard.

December 3d, the proposal of Booth Brothers and Hurricane Isle Granite Company to furnish and deliver in the city yard 8,000 square yards of granite blocks, cut in accordance with Providence specifications, for \$1.44 per yard, was accepted.

Eight hundred and eighty-one notices to build or repair sidewalks were served on the abutting owners during the year 1906. The work, including seventy-one brought over from the preceding year, was done as follows:

By the abutting owners.....	717
By the city, at the expense of the abutting owners.....	100
Extension of time for doing work granted to.....	23
Work not done.....	112

The length of received streets December 31, 1906, was about 236.87 miles, measured on street lines and to street line intersection. But, as it is customary in street construction or street paving to complete the work to the curb line intersection, the lengths in the following tables are measured on those lines and sub-divided as follows:

Received streets.....	243.23 miles.
Streets curbed and built with macadam.....	167.91 miles.
Streets not curbed, but the roadway macadamized or graveled.....	29.25 miles.
Streets curbed and paved.....	34.66 miles.
Streets received, but not improved.....	11.41 miles.
<b>Total.....</b>	<b>243.23 miles.</b>

The actual area of street pavement is 764,863 square yards. If this is estimated to an average width of roadway of 30 feet, it would be equal to 43.46 lineal miles, and is sub-divided as follows :

Granite blocks.....	32.54 miles.
Cobble.....	5.01 miles.
Asphalt.....	5.08 miles.
Vulcanite.....	.41 miles.
Brick.....	.42 miles.

In addition to the general patching necessary to maintain the streets in good repair, the following work has been done during the year ending December 31, 1906, namely :

New streets built of macadam.....	15,470.00 linear feet.
New streets paved.....	1,355.00 linear feet.
Curbing set.....	31,891.5 linear feet.
Streets rebuilt.....	5,050.00 linear feet.
Streets resurfaced.....	183,100.00 linear feet.
Streets graded.....	8,475.00 linear feet.
Block pavement laid.....	33,608.80 yards.
Asphalt pavement relaid.....	22,386.50 square yards.
Block paving relaid.....	9,205.90 square yards.
Brick paving relaid.....	365.40 square yards.
Concrete sidewalks laid.....	4,354.10 square yards.
Concrete sidewalks patched and top-dressed.....	5,155.80 square yards.
Crushed stone used.....	55,683.15 tons.
Screened gravel used.....	2,749.5 cubic yards.

Of the above amount of pavement laid and relaid, the cost of laying and relaying 39,696.4 square yards, amounting to \$63,316.08 was paid by the corporations for which the work was done.

The following named streets aggregating 34.6 miles, have been resurfaced during the year :

Academy avenue, from Chalkstone to Atwells.  
 Allens avenue, from Henderson street to Public.  
 America street, from Broadway to Federal street.  
 Andem street, from Canton to Academy avenue.  
 Angell street, from Benefit to Thayer.  
 Arnold street, from Hope to Governor.  
 Arthur avenue, from Cedar street to West Exchange.  
 Atwells avenue, from Aborn street to Bradford.

Ayrault street, from Valley to Chalkstone avenue.  
 Bancroft street, from Pocasset avenue to Sterling.  
 Bath street, from Orms to Calverly.  
 Beaufort street, from Academy avenue to Mount Pleasant.  
 Bellevue avenue, from Dexter street to Cranston.  
 Benedict street, from Cranston to Salem.  
 Benefit street from Wickenden to North Main.  
 Beverly street, from Fountain to Sabin.  
 Blackstone street, from Plain to Allens avenue.  
 Blackstone boulevard.  
 Blount street, from Bassett to Elm.  
 Bogman street, from Plain to Prairie avenue.  
 Bowen street, from Thayer to Hope.  
 Branch avenue, from Dryden lane to Smithfield avenue.  
 Branch avenue, from Charles street to Hawkins.  
 Bridgham street, from Cranston to Trinity square.  
 Broad street, from West Friendship to Parkis avenue.  
 Burgess street, from Cranston to Westminster.  
 Butler avenue, from Pitman street to Angell.  
 Byron street, from Broad to Pine.  
 Calender street, from Fountain to Sabin.  
 Calhoun avenue, from Potter to Huntington.  
 Cargill street, from Fountain to Carpenter.  
 Cemetery street, from North Main to North Grove.  
 Chalkstone avenue, from Charles street to Evans.  
 Chalkstone avenue, from Douglas to Camden street.  
 Chalkstone avenue, from Manton easterly.  
 Charles street, from Silver Spring to 1,800 feet northerly.  
 Charles Field street, from Thayer to Hope.  
 Chestnut street, from Point to Elm.  
 College street, from South Main to Benefit.  
 Concannon street, from Veazie to Moy.  
 Cooke street, from Angell to Power.  
 Dale street, from West Exchange to Atwells avenue.  
 Davis street, from Smith to Cherry.  
 Douglas avenue, from Orms street to Chalkstone avenue.  
 Doyle avenue, from North Main street to Hope.  
 Dudley street, from Eddy to Plain.  
 East street, from Wickenden to Williams.  
 Eaton street, from River avenue to Oakland.  
 Eddy street, from Broad to Pavilion avenue.  
 Elmwood avenue, from railroad bridge to city line.  
 Felix street, from Valley to Chalkstone avenue.  
 Fenner street, from Broad to Cathedral square.  
 Field street, from Davis to State.  
 Florence street, from Amherst to Manton avenue.  
 Ford street, from Dexter to Messer.  
 Foster street, from Pine to Friendship.  
 Francis street, from Smith to Brownell.  
 Franklin street, from Westminster to Washington.  
 Fremont street, from Governor to Ives.



Fruit Hill avenue, from Manton to Woonasquattuck.  
Gano street, from Waterman to Angell.  
Garden street, from Greene to Franklin.  
Greenwich street, from Bucklin to Potter avenue.  
Halsey street, from Benefit to Brown.  
Hanover street, from Dexter to Cranston.  
Harris avenue, from Atwells to Broadway.  
Harrison street, from Sprague to Wilson.  
Hartford avenue, from Merino to Killingly street.  
Hendrick street, from Academy avenue to Mount Pleasant.  
Hill street, from Howard to Perry.  
Hope street, from India to George.  
Hope street, from Bowen to Olmstead.  
Hope street, from Phillips to Rounsevell avenue.  
Hopkins street, from South Main to Benefit.  
**Hoppin street, from Point to Bassett.**  
**Houston street, from Broad to Plum.**  
**Howard street, from Westminster to Broadway.**  
**Howell street, from Camp to Hope.**  
Hudson street, from Messer to Sycamore.  
James street, from South Main to Benefit.  
Jefferson street, from Orms to Smith.  
Jenckes street, from Benefit to Congdon.  
Kay street, from railroad crossing to Thurburn avenue.  
Kinsley avenue, from Harris to Eagle street.  
Knight street, from Westminster to Cranston.  
Langdon street, from Branch avenue to Monticello street.  
Liberty street, from Jefferson to Smith.  
Linden street, from Providence to Friendship.  
Lockwood street, from Haskins to Prairie avenue.  
Manton avenue, from Fruit Hill to Sisson street.  
Manton avenue, from King street to Florence.  
Medway street, from Wayland avenue to Butler.  
Moy street, from Concannon to Henrietta.  
Mulberry street, from Orms to Cherry.  
North Main street, from Sexton to city line.  
Oppen street, from Branch avenue to Monticello street.  
Orms street, from Charles to Black.  
Orms street, from Smith to Douglas avenue.  
Parnell street, from Cloud to Atwells avenue.  
Pearl street, from Cranston to Broad.  
Perry street, from Westminster to Broadway.  
Pitman street, from Gano to Butler avenue.  
Plain street, from Public to Ashmont.  
Plainfield street, from Jewell to city line.  
Plenty street, from Elmwood avenue to Broad street.  
Plum street, from Oxford to Houston.  
Pocasset avenue, from Webster to Plainfield street.  
Potter avenue, from Calhoun to Dexter street.  
Prairie avenue, from Broad street to Richardson.  
Preston street, from Governor to Ives.

Princeton avenue, from Broad street to Updike.  
 Promenade street, from Park to Gaspee.  
 Public street, from Ocean to Plain.  
 Public street, from Broad to Hamilton.  
 Reservoir avenue, from Pontiac street to Algonquin.  
 Rochambeau avenue, from Camp street to Blackstone boulevard.  
 Roosevelt street, from Bancroft 100 feet westerly.  
 Rugby street, from Thurbers avenue to Pavilion.  
 Scott street, from Howell to Doyle avenue.  
 Shepard street, from Broadway to Carpenter street.  
 Smith street, from Elmhurst to city line.  
 Smith street, from Ruggles to Oakland avenue.  
 South Angell street, from Wayland avenue to Butler.  
 South Court street, from Benefit to Congdon.  
 State street, from Smith to Field.  
 Superior street, from Cranston to Diamond.  
 Swan street, from Eddy to Ocean.  
 Tanner street, from Pearl to Dudley.  
 Thayer street, from Barnes to Angell.  
 Thayer street, from Waterman to Power.  
 Thurbers avenue, from Kay street to Blundell.  
 Transit street, from East to Governor.  
 Traverse street, from Pike to Tockwotton.  
 Updike street, from Public to Whitmarsh.  
 Union avenue, from Webster to Cumerford street.  
 Van Buren street, from Oxford to Houston.  
 Waterloo street, from Dexter to Parade.  
 Waterman street, from Wayland avenue to Butler.  
 Waterman street, from Prospect to Thayer.  
 Wayland avenue, from Pitman street to Waterman.  
 Webster avenue, from Pocasset to Union.  
 Wendell street, from Messer to Superior.  
 West Exchange street, from Aborn to Atwells avenue.  
 West River street, from Cross to Walling.  
 Whitmarsh street, from Broad to Updike.

.95 miles of streets have been rebuilt during the year namely :

Charles street, from Admiral to Silver Spring.  
 Crawford street, from South Water to South Main.  
 Eddy street, from Westminster to Fulton.  
 Henderson street, from Eddy to its easterly termination.  
 Sabin street, from West Exchange to Aborn.  
 South Main Street, from Crawford to Planet.  
 Union street, from Washington to Fountain.

1.6 miles of streets have been graded during the year as follows :

Allens avenue, from Seymour street to track of New York, New Haven & Hartford Railroad Company.

Cedar street, from West Exchange to Acorn.

Chatham street, from Branch avenue to Denison street.

Elton street, from Humboldt avenue easterly 200 feet.

Eudora street, from Eddy to Poe.

Grotto avenue, from President to Irving.

McKinley street, from Elmwood avenue to Alger.

Narragansett avenue, from city line to a point 120 feet north of Ardene street.

River avenue, from Smith street to Eaton.

Unit street, from Chalkstone avenue to Maynard street.

What Cheer avenue, from Pocasset to Laurel Hill.

During the quarter the following work was completed :

#### SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.

May	17,	1906,	<i>Sorrento street, from Union avenue to Waverly street.</i>
"	"	"	<i>Sackett street, from Elmwood avenue to Melrose street.</i>
June	21,	"	<i>Eudora street, from Eddy to Poe.</i>
"	"	"	<i>Poe street, from Rhodes to Public.</i>
Sept.	20,	"	<i>Elton street, from Wayland avenue to Humboldt.</i>
Oct.	18,	"	<i>Cedar street, from Acorn to West Exchange.</i>

#### REMOVE OBSTRUCTIONS, GRADE AND PUT IN GOOD CONDITION.

June	21,	1906,	<i>River avenue, from Eaton street to Smith.</i>
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#### TAKE POSSESSION AND REMOVE OBSTRUCTIONS.

Nov.	1,	1906.	<i>Liberty street, from Smith to Jefferson.</i>
"	15,	"	<i>Cedar street, from Acorn to West-Exchange.</i>

The following work was in progress December 31, 1906 :

#### SIDEWALKS CURBED AND GUTTERS PAVED.

**Date of order.**

Aug.	2,	1906,	<i>Allens avenue, from Henderson street to Globe.</i>
Sept.	20,	"	<i>Kelly street, from the angle in said street to Bancroft.</i>
Nov.	15,	"	<i>McKinley street, from Elmwood avenue to Alger.</i>

#### LAY OUT, EXTEND, WIDEN, AND IMPROVE.

**Date of order.**

Aug.	3,	1906,	<i>Allens avenue and Eddy street.</i>
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The following work, ordered by the board of aldermen and city council, had not commenced December 31, 1906, namely :

#### SIDEWALKS CURBED AND GUTTERS PAVED.

**Date of order.**

Nov.	15,	1906,	<i>Mount Pleasant avenue, from Atwells to Dover street.</i>
"	"	"	<i>Progress avenue, from Webster to Whitehall street.</i>

Bills approved on account of highways from October 1, to December 31, 1906, inclusive, amounted to :

Regular appropriation.....	\$96,151 48	
Special appropriation.....	26,303 59	
		<u>\$122,455 07</u>

## Classified as follows :

Repairs on paved streets.....	\$31,925 99
Cleaning streets.....	16,943 92
Repairs on unpaved streets .....	14,258 67
Crushed stone, material and labor.....	12,469 17
Barn expenses.....	2,998 45
Blacksmith and wheelwright shop.....	2,765 60
Tools, implements, etc.....	2,621 12
Removing snow and ice.....	1,128 16
Repairs on stone crushers.....	1,013 18
Labor on material.....	698 34
Stone, paving and crosswalk.....	653 90
Steam rollers, repairs and sup.....	587 26
Sundries.....	561 13
<b>Watering streets.....</b>	<b>546 94</b>
<b>Superintendent's salary.....</b>	<b>442 00</b>
<b>Building driveways, etc.....</b>	<b>401 21</b>
<b>Horses, wagons, harnesses, etc.....</b>	<b>289 93</b>
<b>Fencing streets, material and labor.....</b>	<b>267 63</b>
<b>Watchman at city yard.....</b>	<b>156 00</b>
<b>Repairs on buildings, highway yard.....</b>	<b>73 01</b>
<b>Office expenses, city yard.....</b>	<b>46 42</b>
<b>Car fares.....</b>	<b>45 00</b>
<b>Telephone lines.....</b>	<b>5 60</b>
	<hr/>
	<b>\$90,898 4</b>

### NEW WORK — BUILDING AND REBUILD- ING STREETS, ETC.

## SIDEWALKS CURBED AND GUTTERS PAVED.

<i>Cedar street</i> , from Acorn to West Exchange.....	\$349 99
<i>Elton street</i> , from Wayland avenue to Humboldt..	620 98
<i>Eudora street</i> , from Eddy to Poe.....	461 43
<i>McKinley street</i> , from Elmwood avenue to Alger..	824 14
<i>Poe street</i> , from Rhodes to Public.....	695 98
<i>Sackett street</i> , from Elmwood avenue to Melrose street.....	860 22
<i>Sorrento street</i> , from Union avenue to Waverly street.....	940 11
	<hr/>
	<b>5,252 4</b>

## REMOVE OBSTRUCTIONS, GRADE AND PUT IN GOOD CONDITION.

<i>Crawford street</i> , from South Water to South Main, and South Main street, from Crawford to Planet.....	<b>12,263 4</b>
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## LAY OUT, EXTEND, WIDEN AND IMPROVE.

<i>Allens avenue</i> and Eddy street.....	<b>14,041 1</b>
	<hr/>
	<b>\$122,455 4</b>

Bills deposited with the city treasurer  
for collection from October 1, to December  
31, 1906, inclusive, amounted to . . . \$11,760 61

As follows :

Labor and material.....	\$10,582 71
Blacksmith and harness work for other depart- ments.....	541 80
Street sweepings.....	238 25
Building driveways, etc.....	184 11
Boarding horses for other departments.....	136 14
Manure from barn.....	72 00
Empty oil barrels.....	5 60
	<hr/>
	\$11,760 61

During the quarter, coupons from bills  
collected have been returned by the city  
treasurer and receipted for to the amount of \$11,279 47

As follows :

Labor and material.....	\$9,972 37
Blacksmith and harness work for other depart- ments.....	558 35
Building driveways, etc.....	294 41
Street sweepings.....	243 00
Boarding horses for other departments.....	136 14
Manure from barn.....	72 00
Empty oil barrels.....	3 20
	<hr/>
	\$11,279 47

## SIDEWALKS AND CURBING.

Bills approved on account of sidewalks  
and curbing from October 1 to December 31,  
1906, inclusive, amounted to . . . \$5,438 35

Charged as follows :

Granite curbing.....	\$3,658 09
Concreting sidewalks.....	1,652 98
Repairing sidewalks and gutters.....	127 28
	<hr/>
	\$5,438 35

Bills deposited with the city treasurer for collection (for granite curbing) from October 1 to December 31, 1906, inclusive, amounted to . . . . . \$887 09

During the quarter, coupons from bills collected (for granite curbing), have been returned by the city treasurer, and receipted for to the amount of . . . . . \$936 19

#### CITY ENGINEER.

Bills approved on account of the city engineer's department from October 1 to December 31, 1906, inclusive, amounted to \$10,241 92

##### Charged as follows :

Salary — city engineer.....	\$1,125 00
Salaries of assistants.....	7,590 71
Salaries of clerks.....	828 75
Car fares.....	403 30
Supplies, drawing material, etc.....	225 41
Telephone lines.....	25 70
Instruments and repairs.....	23 45
Meteorological instruments and repairs.....	16 50
Sundries.....	3 10
	<hr/>
	\$10,241 92

#### BRIDGES.

Bills approved on account of bridges from October 1, to December 31, 1906, inclusive, amounted to . . . . . \$4,804 23

## Charged as follows :

Barn expenses.....	\$124 29
Branch avenue bridge.....	6 18
Building at city yard.....	5 92
Cemetery street bridge.....	2 43
Crawford street bridge.....	17 08
Eagle street bridge.....	4 92
Exchange bridge.....	68 93
Gaspee street bridge.....	1 85
Horses, wagons, harnesses, etc.....	42 89
Lumber, hardware, etc.....	342 00
Manton avenue bridge.....	9 00
Merino bridge.....	50 30
Mill street bridge.....	23 85
Point street bridge.....	379 34
Promenade street bridge.....	26 85
Randall street bridge.....	3 90
Red bridge.....	211 37
Rent of keeper's house—Washington bridge.....	36 00
Salaries—Point street bridge.....	1,004 25
Salaries — Red bridge.....	527 50
Salaries — Washington bridge..	550 25
Smith street bridge.....	13 10
Smithfield avenue bridge—to rebuild.....	493 15
Sundries.....	192 46
Telephone lines.....	2 68
Tools.....	103 02
Valley street bridge — north span.....	3 18
Valley street bridge — south span.....	5 15
Washington bridge.....	479 99
Washington row bridge.....	7 35
Weybosset bridge.....	59 39
Whelden street bridge.....	5 57
	<hr/>
	\$4,804 23

Bills approved for account of rebuilding abutments, piers, and superstructure, Point street bridge, from October 1, to December 31, 1906, inclusive, have been paid from the special appropriation for that work to the amount of . . . . . \$14,036 54



## PUBLIC LIGHTS.

Bills approved on account of the public lights from October 1, to December 31, 1906, inclusive, amounted to . . . \$69,663 96

## Charged as follows:

Arc lights.....	\$50,108 82
Incandescent lights.....	13,282 99
Welsbach lights.....	6,065 15
Salaries .....	195 00
Setting and removing gas posts.....	11 00
	<hr/>
	\$69,663 96

Bills deposited with the city treasurer for collection from October 1, to December 31, 1906, inclusive, amounted to . . . \$13 25

## As follows:

Lamp post, lanterns and frames.....	\$8 25
Resetting gas post.....	5 00
	<hr/>
	\$13 25

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of \$13 25

## As follows:

Lamp post, lanterns and frames.....	\$8 25
Resetting gas post.....	5 00
	<hr/>
	\$13 25

## PUBLIC WORKS OFFICE.

Bills approved on account of the public works office from October 1. to December 31, 1906, inclusive amounted to . . . \$5,435 72

Charged as follows :

Salaries of commissioners and secretary. . . . .	\$1,925 00
Salaries of office assistants. . . . .	3,335 62
Office supplies. . . . .	135 15
Telephone lines. . . . .	19 96
	<hr/>
	\$5,435 72

## ABOLISHING GRADE CROSSING AT GROVE STREET, ETC.

Bills approved for account of abolishing grade crossing at Grove street, etc., from October 1, to December 31, 1906, inclusive, have been paid from the special appropriation for that work, to the amount of . . . \$6,894 68

Charged as follows :

Building approaches to Arthur avenue bridge . . .	\$6,659 31
Building retaining walls, etc , Barre street. . . .	235 37
	<hr/>
	\$6,894 68

WALTER F. SLADE,

*Commissioner.*





Bills deposited with the city treasurer for collection (for granite curbing) from October 1 to December 31, 1906, inclusive, amounted to . . . . .

\$887 00

During the quarter, coupons from bills collected (for granite curbing), have been returned by the city treasurer, and receipted for to the amount of . . . . .

\$936 19

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